CHAPTER 4

RIGGING TRACTOR ON A TYPE V PLATFORM

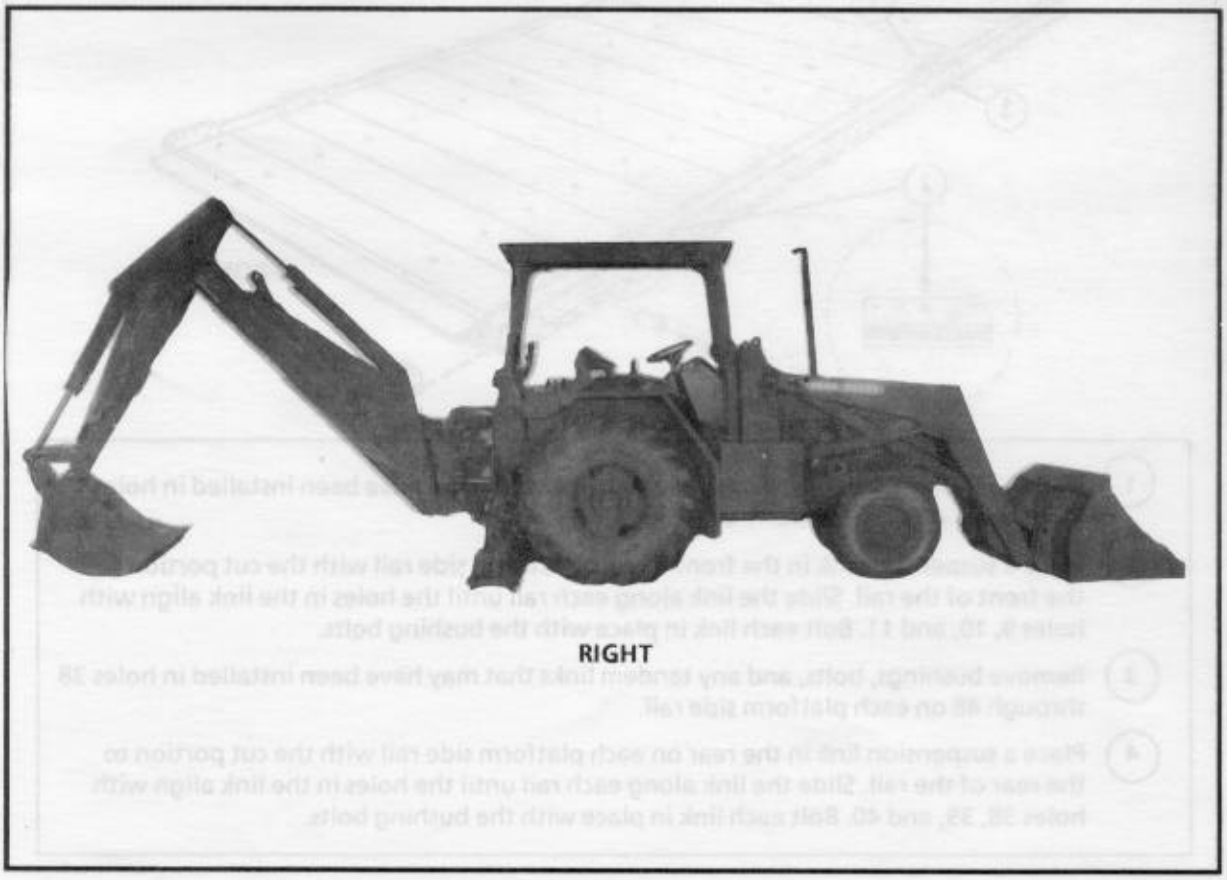
Section I

LOW-VELOCITY AIRDROP

4-1. Description of Load

The JD 410 tractor (Figure 4-1) is rigged on a 24-foot, type V platform with five G-11A or four G-11B cargo parachutes and other items of airdrop equipment. The tractor weighs 15,670 pounds with 1/2 tank of fuel. Its height is 104 inches, reducible to 75 inches. Its width is 126 inches, reducible to 95 inches. The length of the tractor is 437 inches when fully extended, but the rigging length is 336 inches.

NOTE: The tractor must be equipped with an extraction yoke assembly to be airdropped.



RIGHT

Figure 4-1. Right side of the unrigged JD 410 tractor

4-2. Preparing Platform

Prepare a 24-foot, type V platform as described below.

a. Inspecting Platform. Inspect, or assemble and inspect, the platform according to TM 10-1670-268-20&P/TO 13C7-52-22.

NOTE: If the platform must be assembled, install the suspension links when assembling the platform. See Figure 4-2 for the location of the suspension links.

b. Installing Suspension Links. Install the suspension links on an assembled platform as described in Figure 4-2.

c. Installing Tandem Links. Install a tandem link on the front of each rail as shown in Figure 4-3.

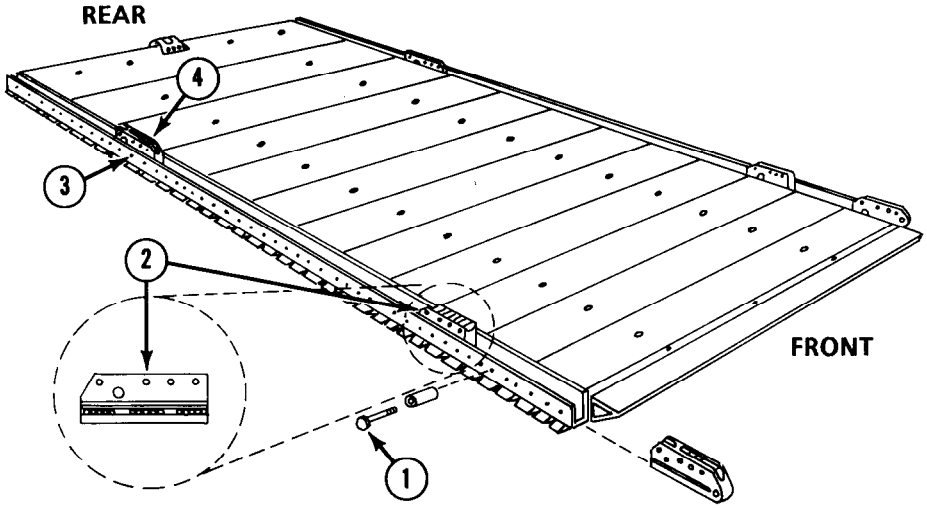
d. Attaching and Numbering Clevises. Attach and number 32 tie-down clevises as shown in Figure 4-3.

e. Labeling and Numbering Tie-down Rings. Label and number the tie-down rings as shown in Figure 4-3.

NOTES: 1. The nose bumper may or may not be installed.

2. Measurements given in this section are from the front edge of the platform, NOT from the front edge of the nose bumper.

NOTE: This drawing is not drawn to scale.



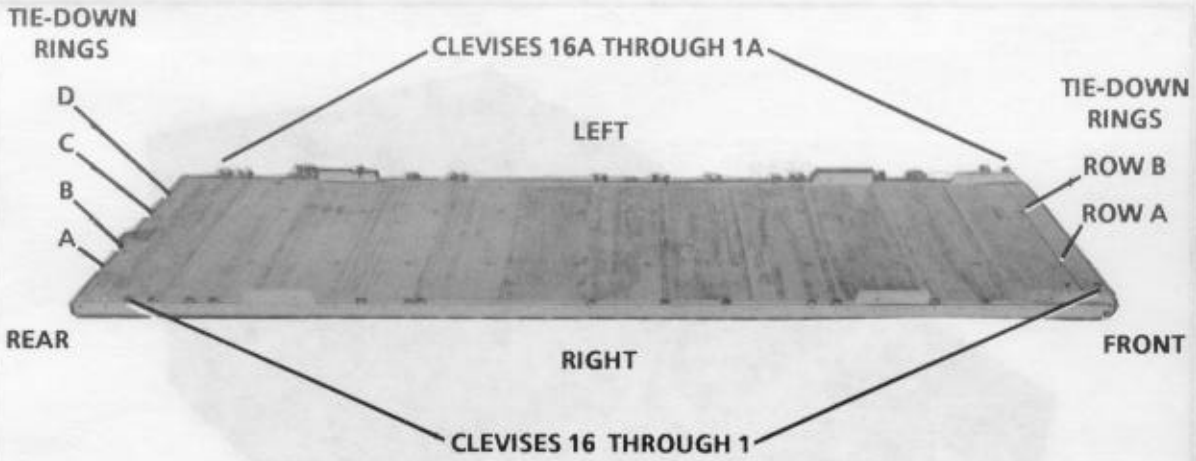
(1) Remove bushings, bolts, and any tandem links that may have been installed in holes 1 through 11 on each platform side rail.

(2) Place a suspension link in the front of each platform side rail with the cut portion to the front of the rail. Slide the link along each rail until the holes in the link align with holes 9, 10, and 11. Bolt each link in place with the bushing bolts.

(3) Remove bushings, bolts, and any tandem links that may have been installed in holes 38 through 48 on each platform side rail.

(4) Place a suspension link in the rear on each platform side rail with the cut portion to the rear of the rail. Slide the link along each rail until the holes in the link align with holes 38, 39, and 40. Bolt each link in place with the bushing bolts.

Figure 4-2. Suspension links installed



Step:

1. Install a tandem link on the front of each platform side rail using holes 1, 2, and 3.
2. Install a clevis on bushings 1 and 3 of each front tandem link.
3. Starting at the front of the platform, install clevises on each platform side rail using bushings bolted on holes 6, 8, 13, 14, 18, 21, 24, 32, 33, 35, 42, 43, 45, and 46.
4. Starting at the front of the platform, number the clevises bolted to the right side from 1 through 16 and those bolted to the left side from 1A through 16A.
5. Label the two tie-down rings in the first 11 panels A and B from right to left. Label the four tie-down rings in the last panel A, B,C, and D from right to left. Starting at the front of the platform, number the rows of tie-down rings 1 through 12.

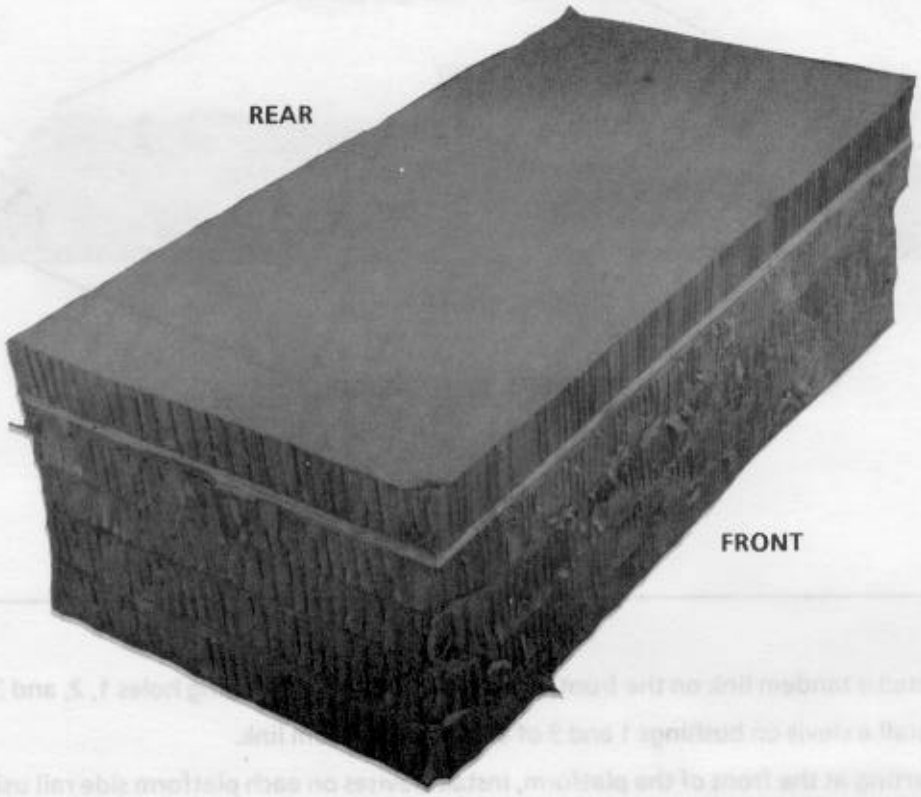
NOTE: Make sure the extraction bracket assembly is installed and is in operating condition.

Figure 4-3. Platform prepared

4-3. Building and Placing Honeycomb Stacks

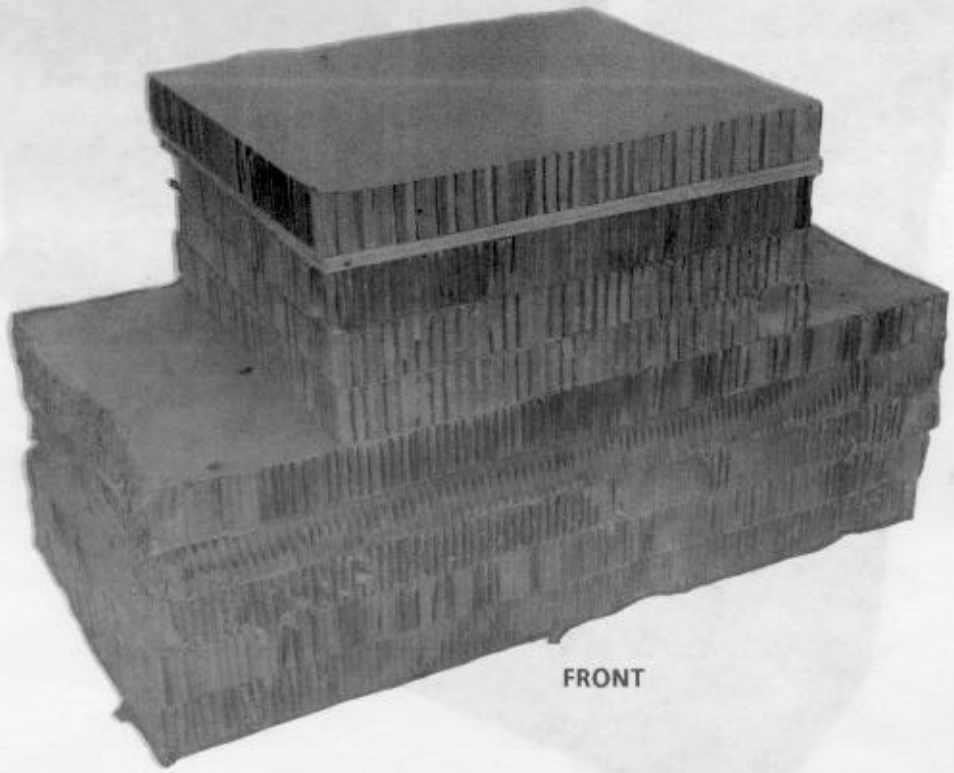
Build and place honeycomb stacks as described below.

a. Building Honeycomb Stacks. Build the honeycomb stacks as shown in Figures 4-4 through 4-11.



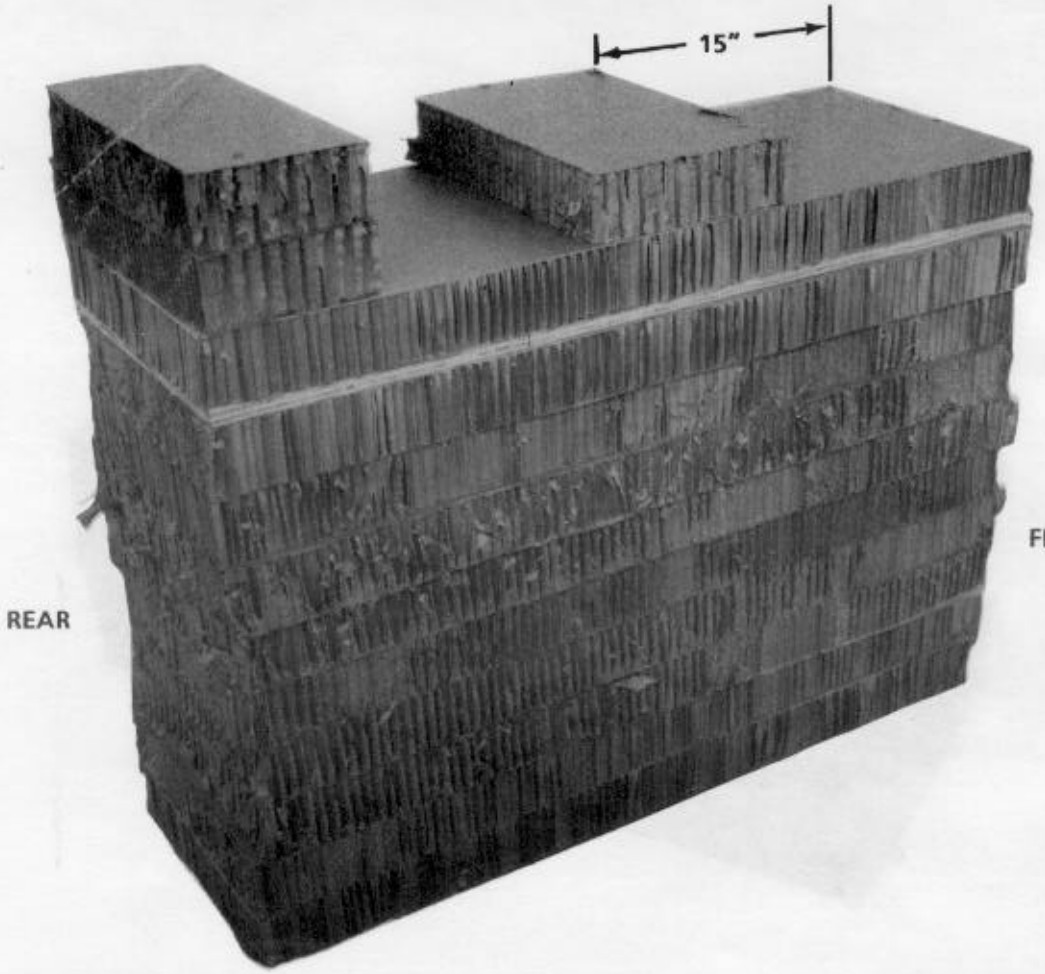
Stack Number	Pieces	Width (Inches)	Length (Inches)	Material	Instructions
1	4	48	24	Honeycomb	Place honeycomb as base.
	1	48	24	3/4-inch plywood	Place plywood on top of base.
	1	48	24	Honeycomb	Place honeycomb on top of plywood.

Figure 4-4. Honeycomb stack 1 prepared



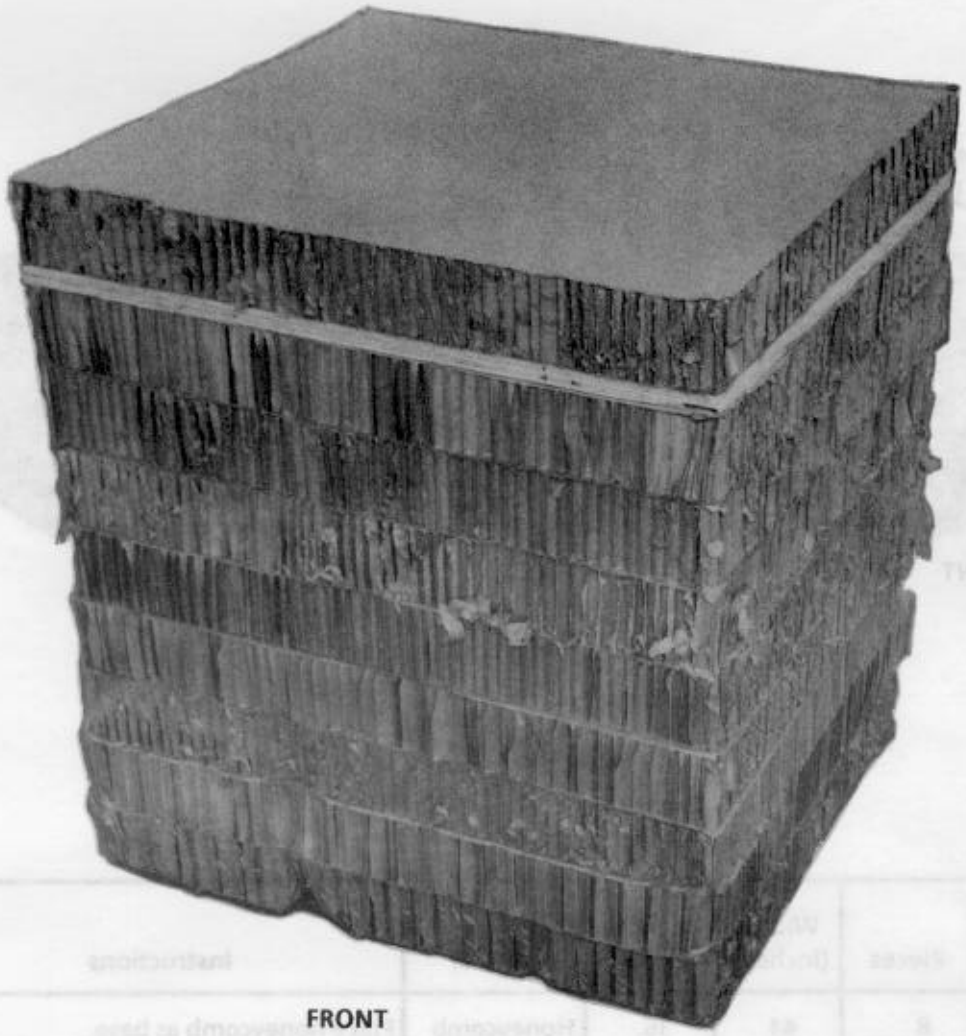
Stack Number	Pieces	Width (Inches)	Length (Inches)	Material	Instructions
2	5	48	24	Honeycomb	Place honeycomb as base.
	3	28	24	Honeycomb	Center honeycomb on top of base.
	1	28	24	3/4-inch plywood	Place plywood on top of honeycomb.
	1	28	24	Honeycomb	Place honeycomb on top of plywood.

Figure 4-5. Honeycomb stack 2 prepared



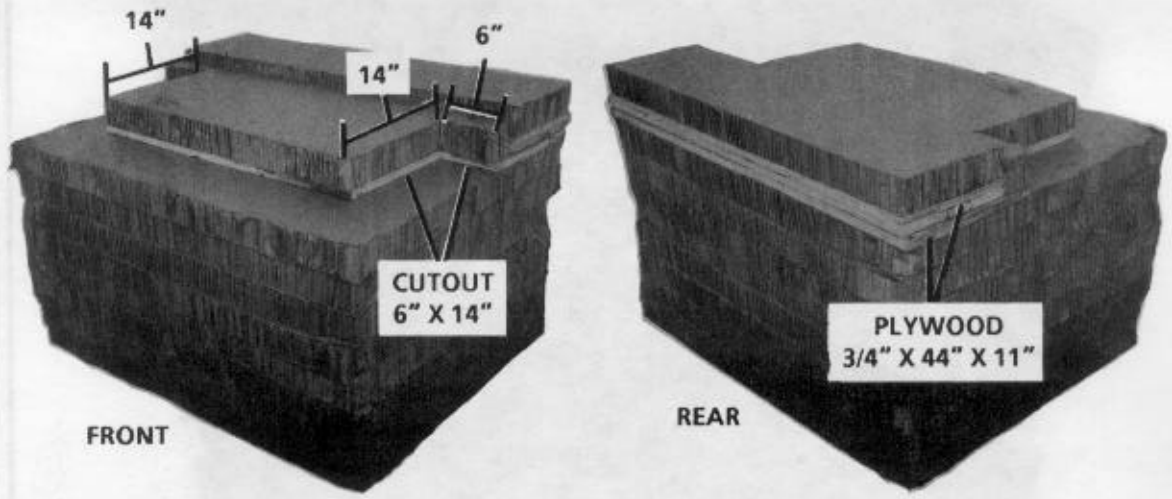
Stack Number	Pieces	Width (Inches)	Length (Inches)	Material	Instructions
3	9	15	42	Honeycomb	Place honeycomb as base.
	1	15	42	3/4-inch plywood	Place plywood on top of honeycomb.
	1	15	42	Honeycomb	Place honeycomb on top of plywood.
	1	15	10	Honeycomb	Place honeycomb on top of the base, 15 inches from the front edge.
	2	15	7	Honeycomb	Place honeycomb on top of the base, flush with the rear edge.

Figure 4-6. Honeycomb stack 3 prepared



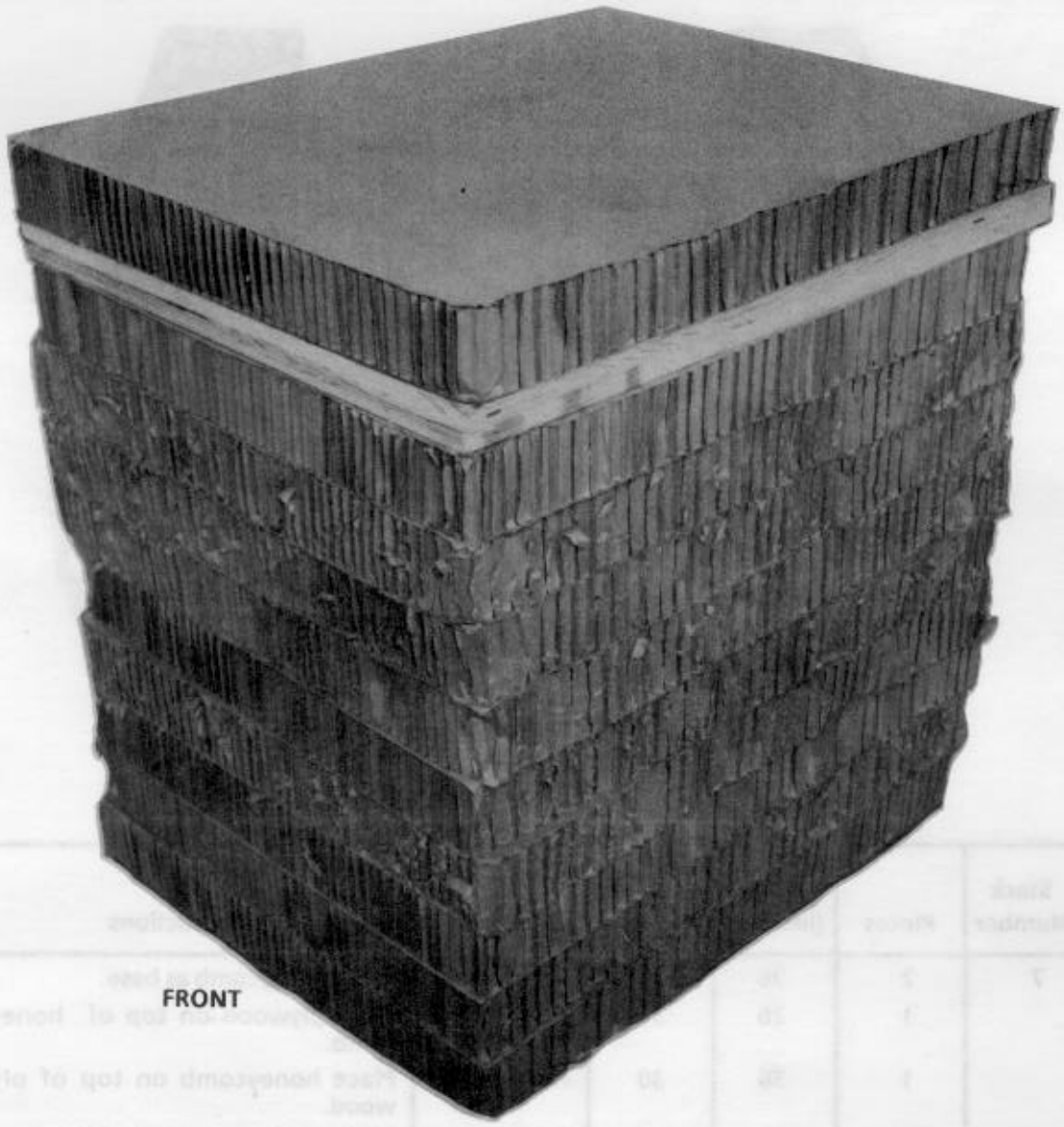
Stack Number	Pieces	Width (Inches)	Length (Inches)	Material	Instructions
4	8	26	24	Honeycomb	Place honeycomb as base.
	1	26	24	3/4-inch plywood	Place plywood on top of honeycomb.
	1	26	24	Honeycomb	Place honeycomb on top of plywood.

Figure 4-7. Honeycomb stack 4 prepared



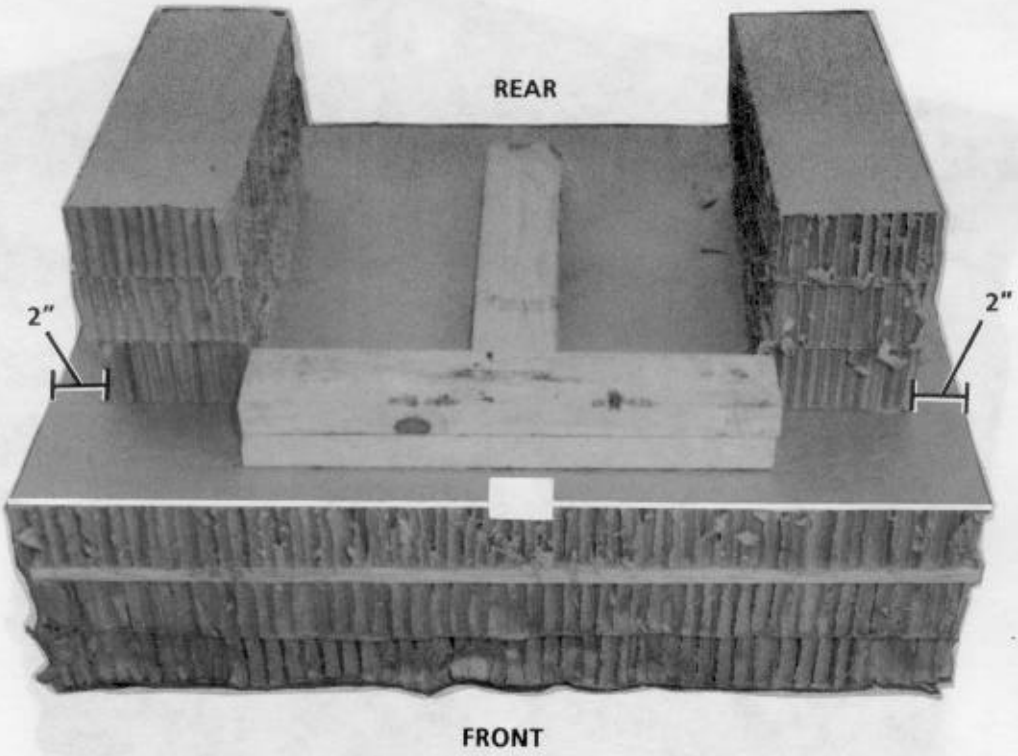
Stack Number	Pieces	Width (Inches)	Length (Inches)	Material	Instructions
5	8	44	36	Honeycomb	Place honeycomb as base.
	1	44	28	3/4-inch plywood	Make a 6- by 14-inch cutout in each front corner of the plywood. Place plywood on top of the base, flush with the rear edge.
	2	44	11	3/4-inch plywood	Place the 44- by 11- inch plywood on top of the 44- by 28-inch plywood, flush with the rear edge.
	1	44	11	Honeycomb	Place honeycomb on top of the 44- by 11-inch plywood.
	1	44	17	Honeycomb	Make a 6- by 14-inch cutout in each front corner of the honeycomb. Place honeycomb on top of the 44- by 28-inch plywood.

Figure 4-8. Honeycomb stack 5 prepared



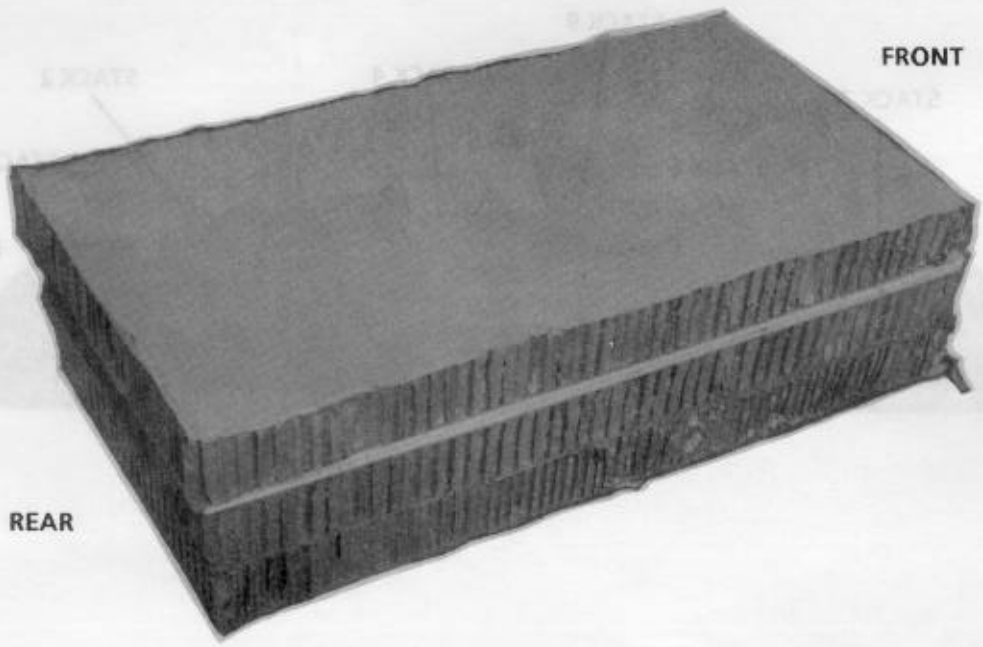
Stack Number	Pieces	Width (Inches)	Length (Inches)	Material	Instructions
6	9	24	30	Honeycomb	Place honeycomb as base.
	2	24	30	3/4-inch plywood	Place plywood on top of honeycomb.
	1	24	30	Honeycomb	Place honeycomb on top of plywood.

Figure 4-9. Honeycomb stack 6 prepared



Stack Number	Pieces	Width (Inches)	Length (Inches)	Material	Instructions
7	2	36	30	Honeycomb	Place honeycomb as base.
	1	36	30	3/4-inch plywood	Place plywood on top of honeycomb.
	1	36	30	Honeycomb	Place honeycomb on top of plywood.
	3	6	18	Honeycomb	Center honeycomb 2 inches from the left side.
	3	6	18	Honeycomb	Center honeycomb 2 inches from the right side.
	2	20	4	2-inch lumber	Center lumber 2 inches from the front edge.
	1	4	20	2-inch lumber	Center lumber between the 6- by 18-inch pieces of honeycomb and flush against the 20- by 4-inch piece of lumber.

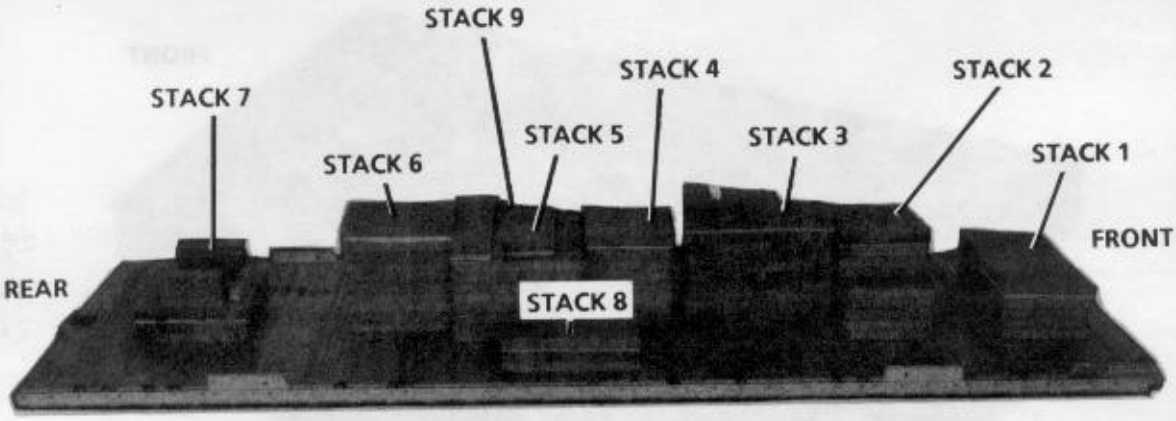
Figure 4-10. Honeycomb stack 7 prepared



Stack Number	Pieces	Width (Inches)	Length (Inches)	Material	Instructions
8	2	18	36	Honeycomb	Place honeycomb as base.
	1	18	36	3/4-inch plywood	Place plywood on top of honeycomb.
	1	18	36	Honeycomb	Place honeycomb on top of plywood.
9	2	18	36	Honeycomb	Place honeycomb as base.
	1	18	36	3/4-inch plywood	Place plywood on top of honeycomb.
	1	18	36	Honeycomb	Place honeycomb on top of plywood.

Figure 4-11. Honeycomb stacks 8 and 9 prepared

b. Placing Honeycomb Stacks. Place the honeycomb stacks on the platform as shown in Figures 4-12, 4-13, and 4-14.



Stack Number	Position of Stack on Platform
	Place stack:
1	Centered 6 inches from the front edge of the platform.
2	Centered 20 inches from stack 1.
3	Centered flush against stack 2.
4	Centered 4 inches from stack 3.
5	Centered flush against stack 4.
6	Centered flush against stack 5.
7	Centered 26 inches from stack 6.
8	130 inches from the front edge of the platform and 9 inches from the right rail.
9	130 inches from the front edge of the platform and 9 inches from the left rail.

Figure 4-12. Honeycomb stacks placed on platform

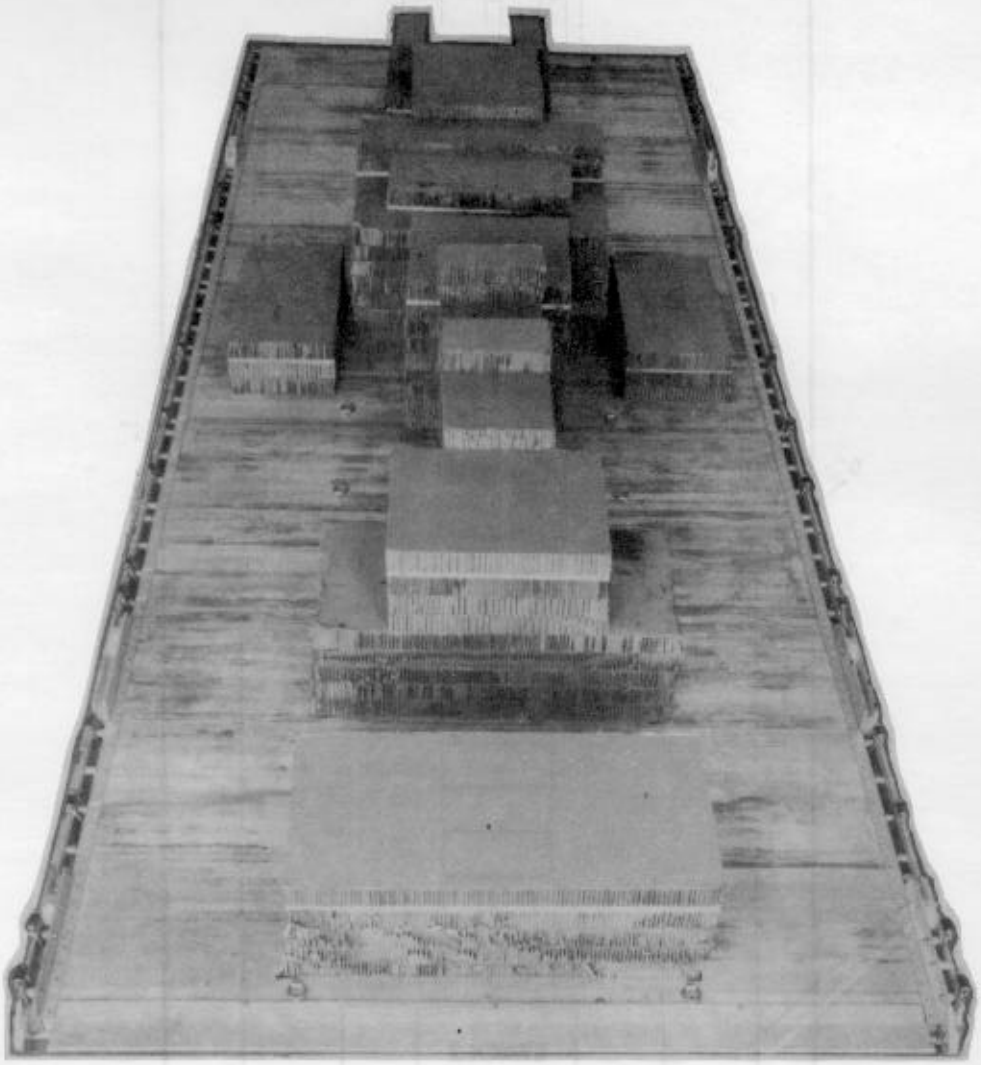


Figure 4-13. Front view of honeycomb stacks placed on platform

NOTE: This drawing is not drawn to scale.

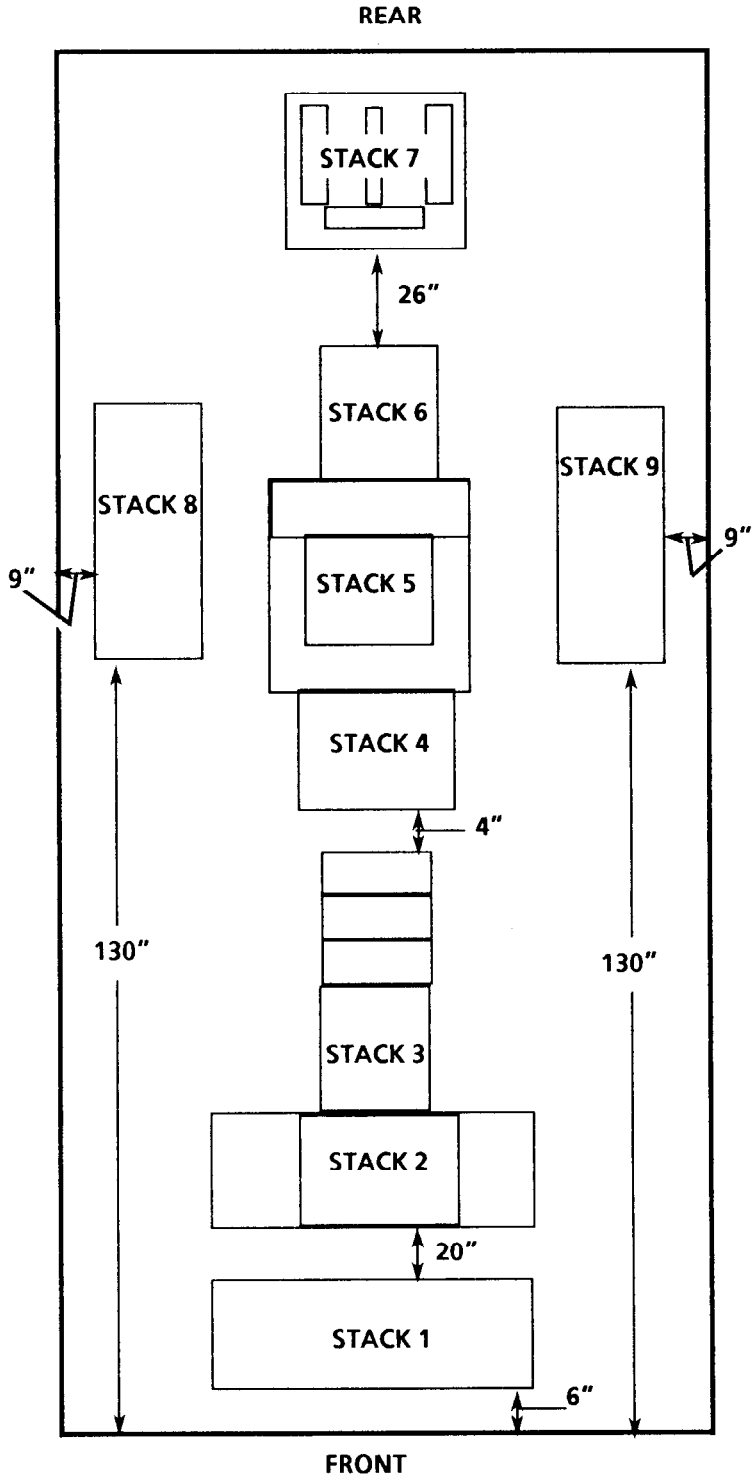
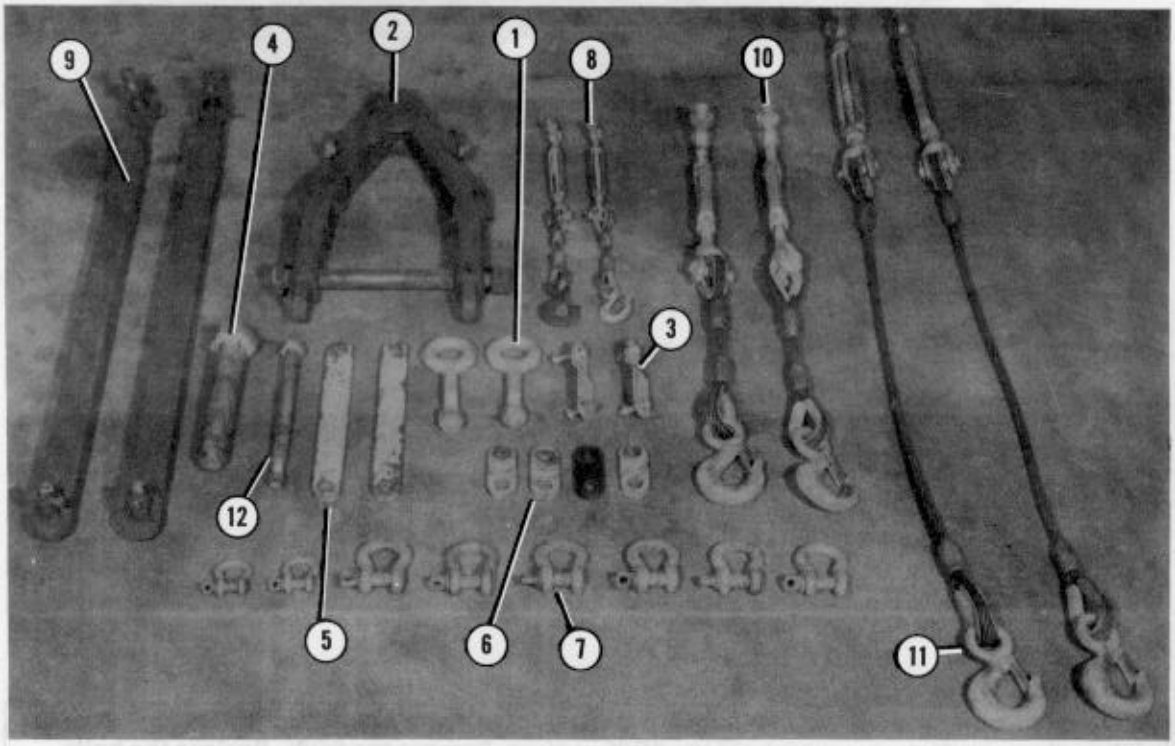


Figure 4-14. Top view of honeycomb stacks placed on platform

4-4. Preparing Tractor

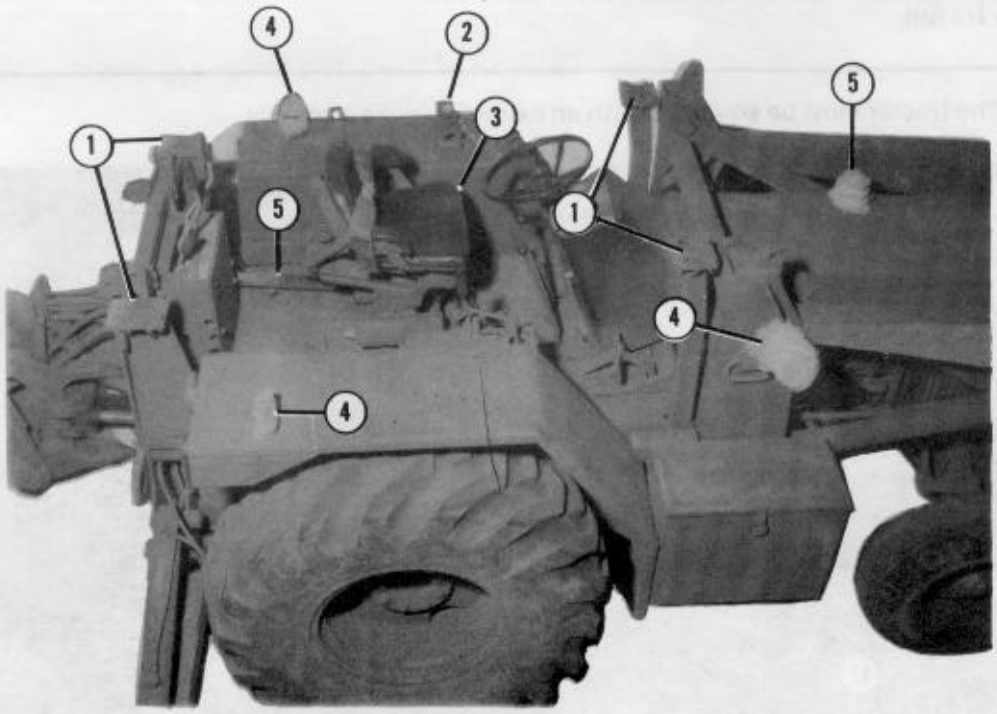
Prepare the tractor as shown in Figures 4-15 through 4-28. Make sure the fuel tank is no more than 1/2 full.

NOTE: The tractor must be equipped with an extraction yoke assembly.



1	Eye bolts (2)	7	Screw-pin clevises (2 small, 6 medium)
2	Extraction yoke (1)	8	Bracket cables (2)
3	Jaw braces (2)	9	Upper cable braces (2)
4	Large bolt (1)	10	Upper cable assemblies (2)
5	Extraction yoke braces (2)	11	Lower cable assemblies (2)
6	Small extraction yoke braces (4)	12	Small bolt (1)

Figure 4-15. Extraction yoke assembly



(1) Remove the bolts which hold the ROPS in place. Remove the ROPS. Replace the bolts.

NOTE: The ROPS is not airdropped.

(2) Remove the extraction yoke from the fender box.

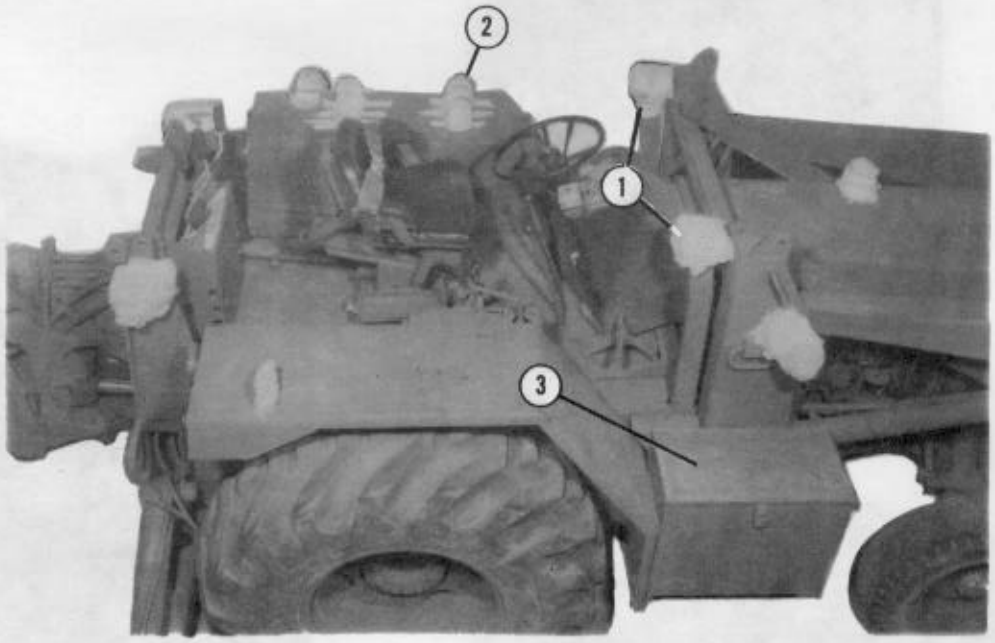
(3) Lower the seat, and lock it in the forward position. Attach the seat belt above the seat.

(4) Fold the lights down. Cover the lights with cellulose wadding, and tape the cellulose wadding in place.

(5) Remove the exhaust pipe. Lay the pipe behind the driver seat. Tie the exhaust pipe in place with type III nylon cord (not shown).

NOTE: Cover the exhaust port with cellulose wadding, and tape the wadding in place. Remove the cellulose wadding and tape from the exhaust port before operating the tractor.

Figure 4-16. ROPS and extraction yoke removed, and seat, exhaust pipe, and lights prepared



1	Pad the ROPS brackets with cellulose wadding, and tape the cellulose wadding in place.
2	Pad the fender brackets with cellulose wadding, and tape the cellulose wadding in place.
3	Remove the extraction yoke assembly components which are stowed in the toolbox.

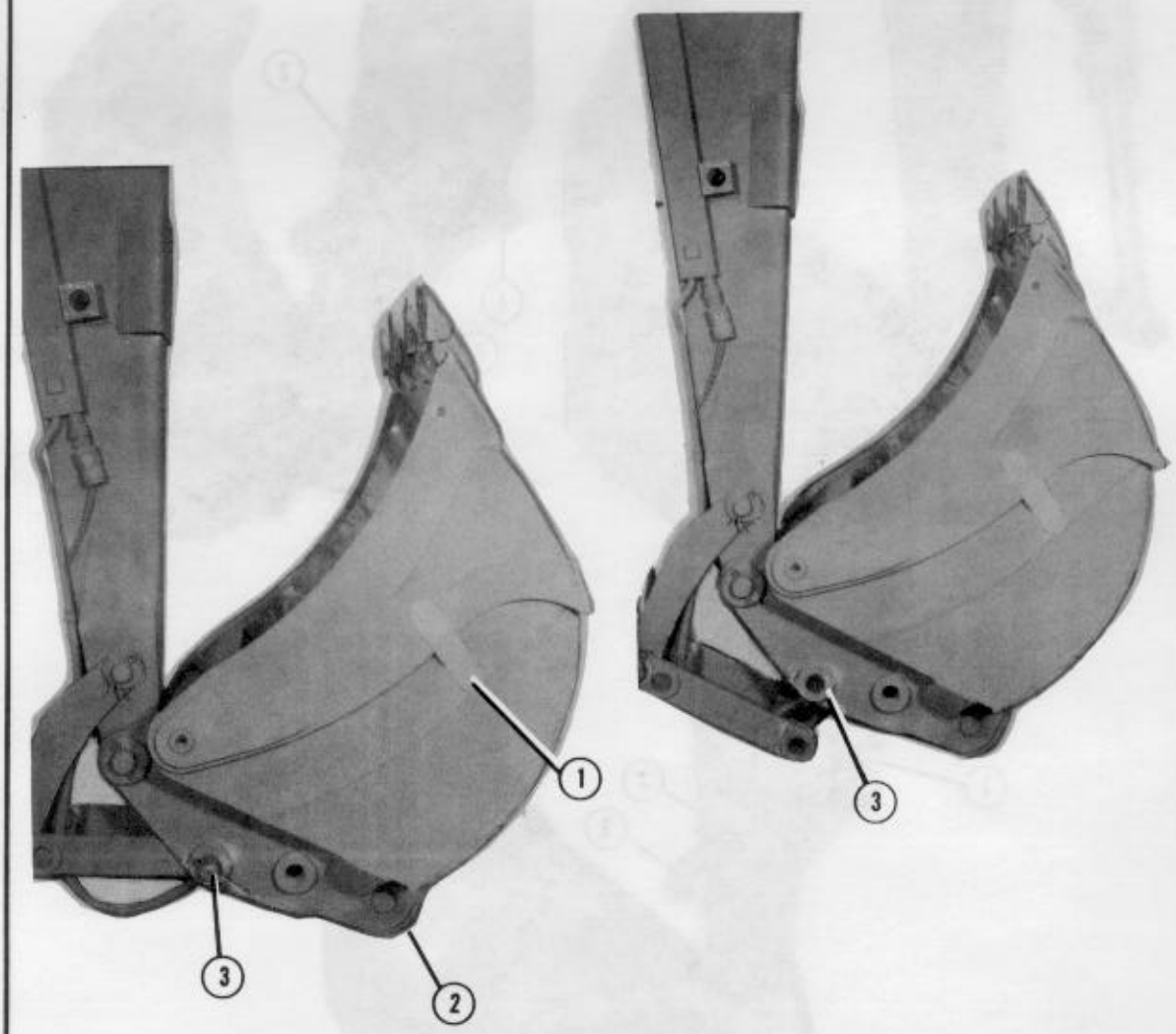
Figure 4-17. ROPS and fender brackets prepared and extraction yoke assembly components removed

(1) Remove the locking pin located at the base of the boom.

NOTE: The locking pin is used to hold the boom in the travel position. Stow the locking pin in the tractor toolbox.

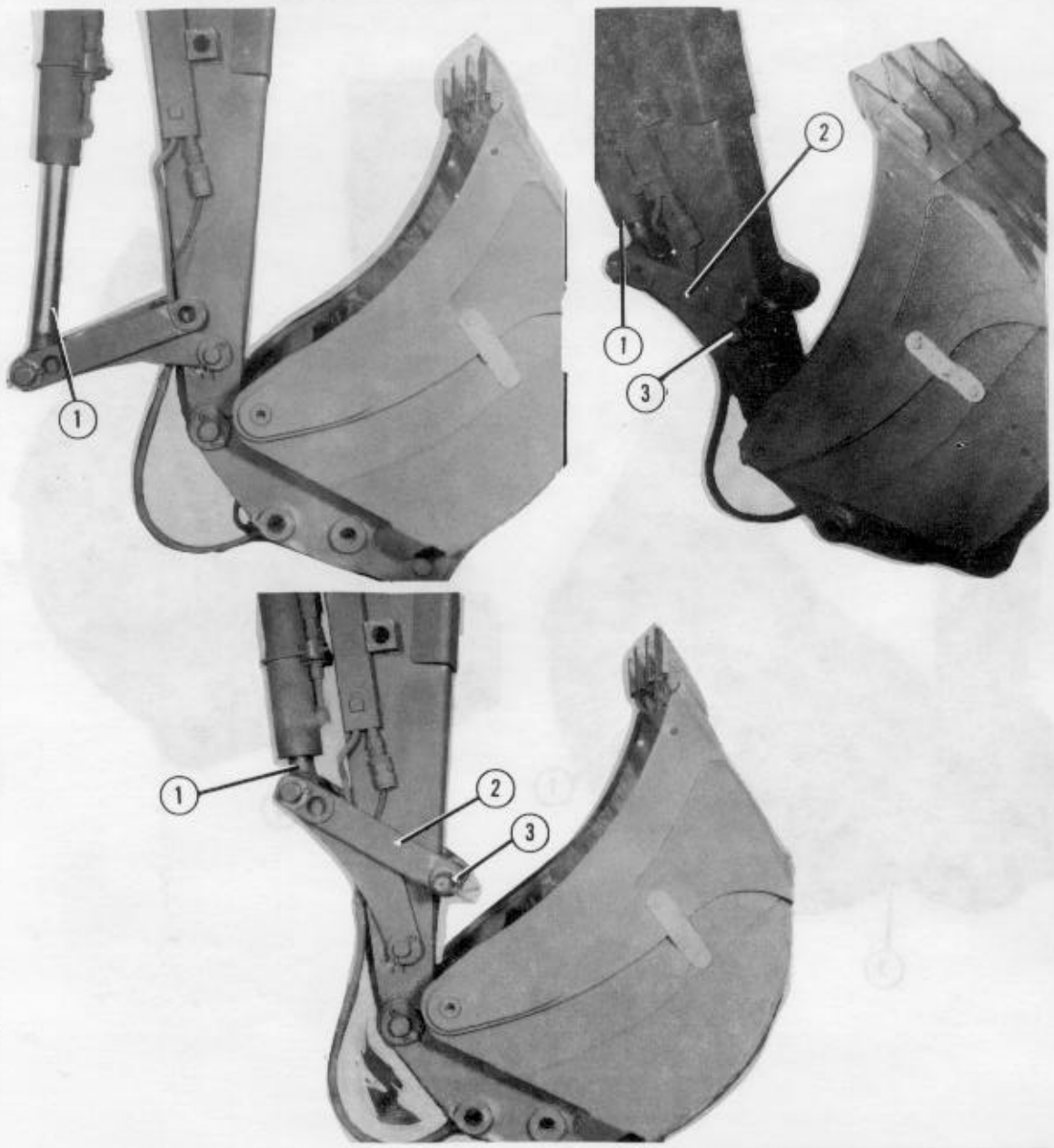
(2) Lower the outriggers, and bolt the eyebolts to the rear suspension plates.

Figure 4-18. Locking pin removed, outriggers lowered, and eyebolts installed



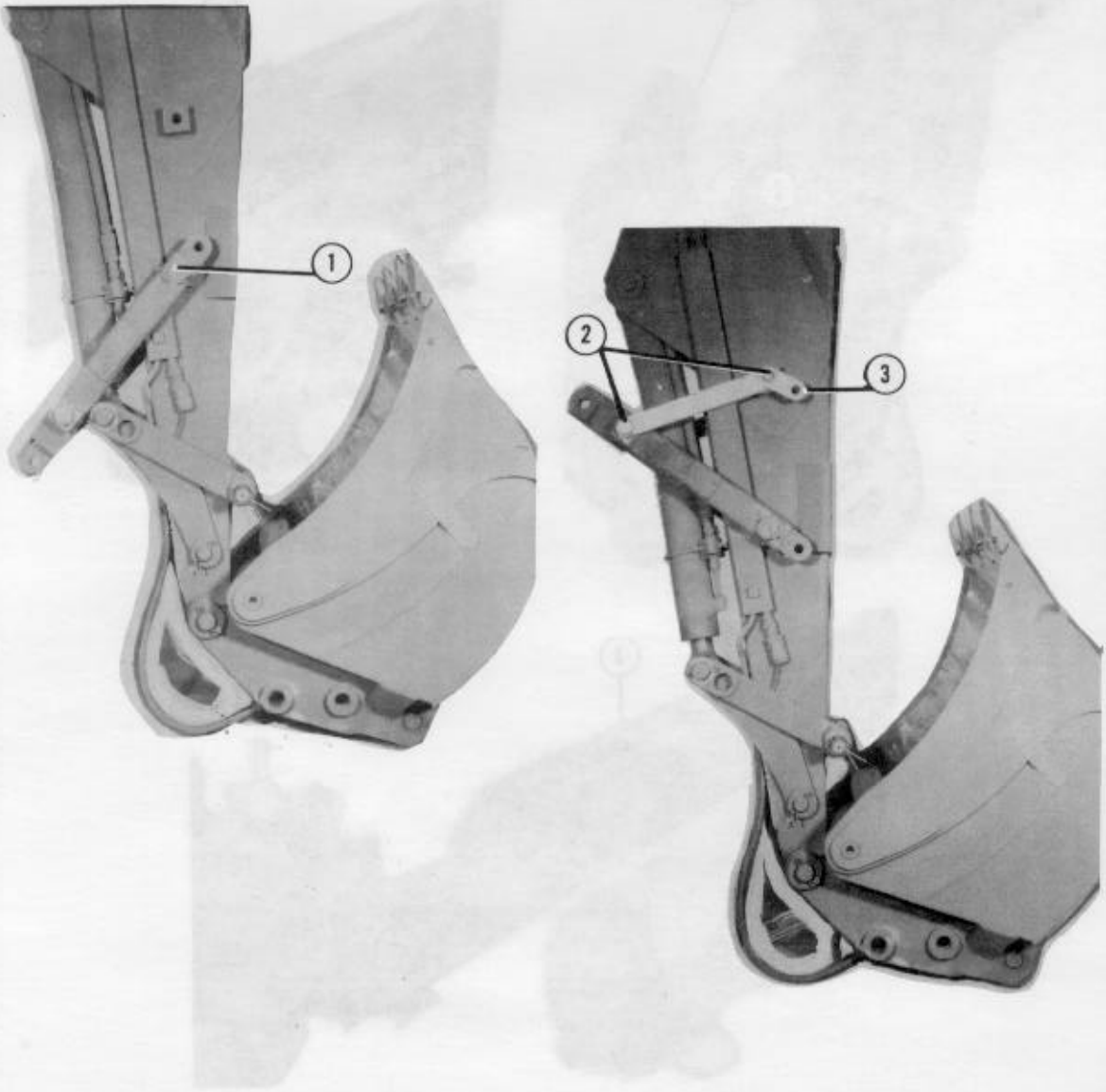
1. Bolt a jaw brace on each side of the bucket.
2. Lower the bucket and the dipper stick into the full-tucked position.
3. Remove the bucket pin from the base of the bucket.

Figure 4-19. Jaw brace installed and bucket pin removed



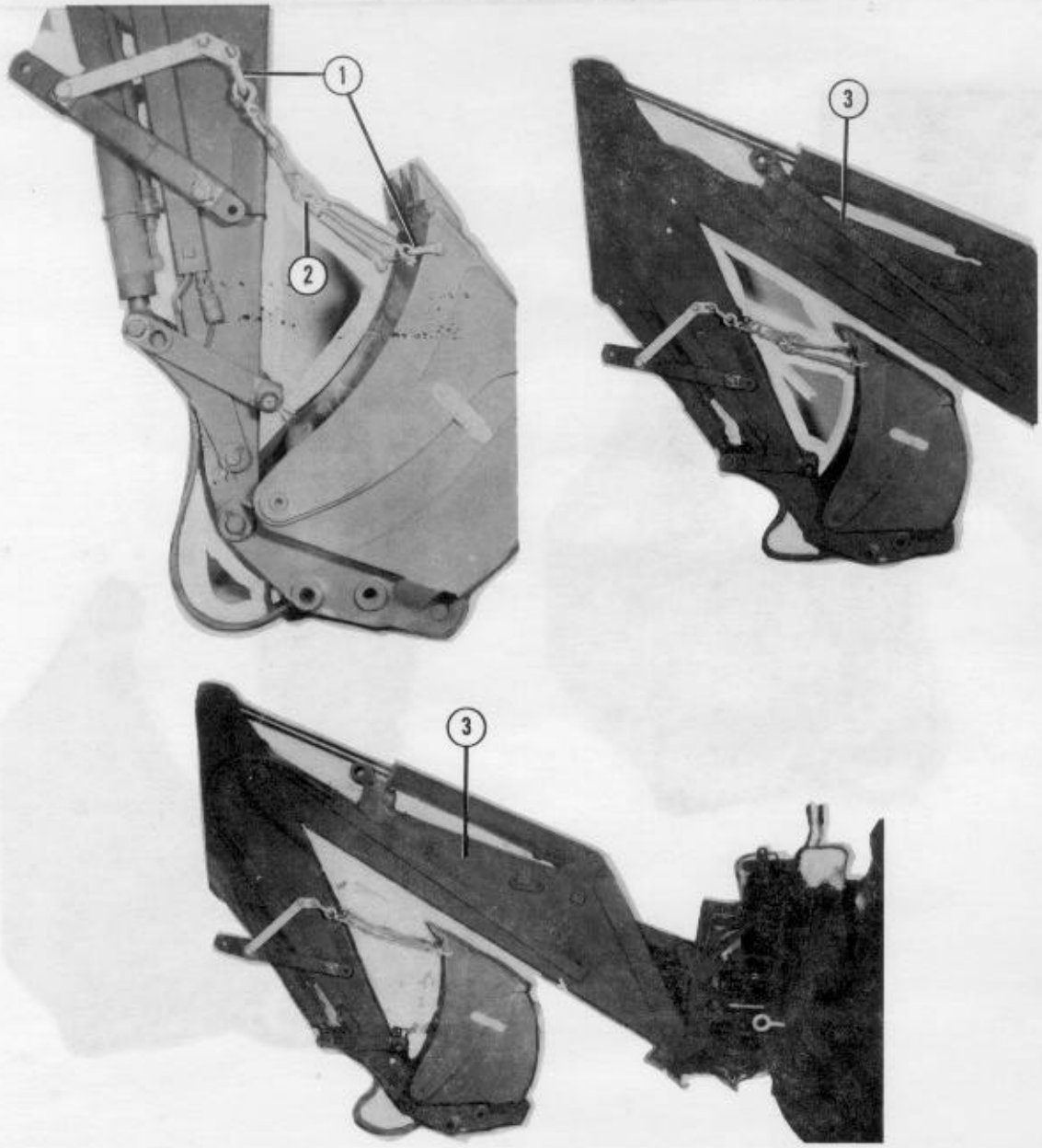
1. Raise the bucket cylinder.
2. Rotate the bucket links into the stowed position.
3. Install the bucket pin in the dipper stick.

Figure 4-20. Bucket pin installed



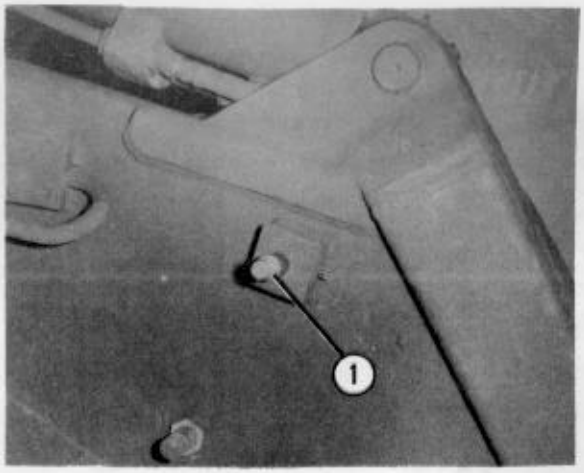
1. Bolt the extraction yoke to the dipper stick with the large bolt.
2. Bolt the two extraction yoke braces to the extraction yoke and the upper dipper stick.
3. Position the smaller yoke braces on the outside of the larger yoke braces.

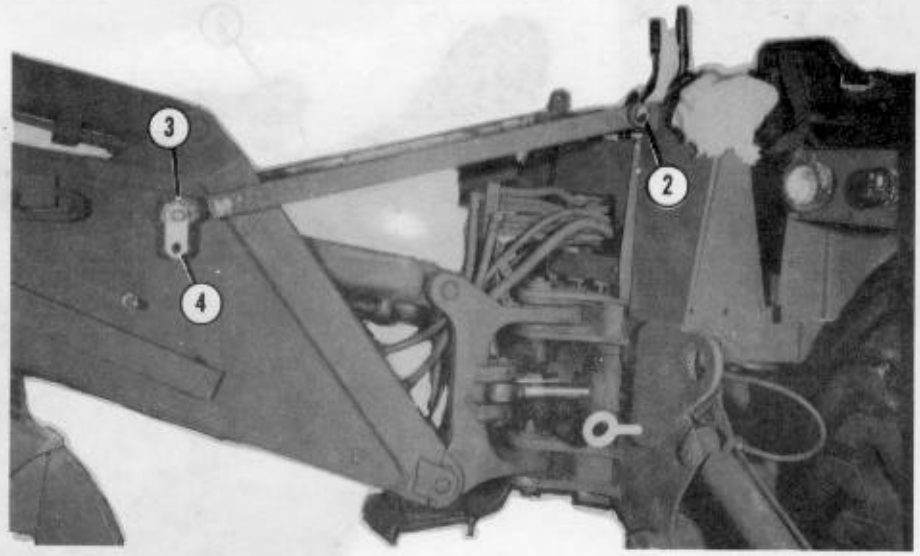
Figure 4-21. Extraction yoke installed



1	Fit a medium screw-pin clevis to each small yoke brace and on both sides of the bucket.
2	Hook the bucket cables between the clevises. Tighten the cables with the turnbuckle located between the clevises.
3	Remove the upper cable braces from their stowed position on the main boom.

Figure 4-22. Bucket cables installed and upper cable braces removed





(1) Install the upper cable brace bolt in the block on both sides of the main boom with a safety pin and a cotter pin.

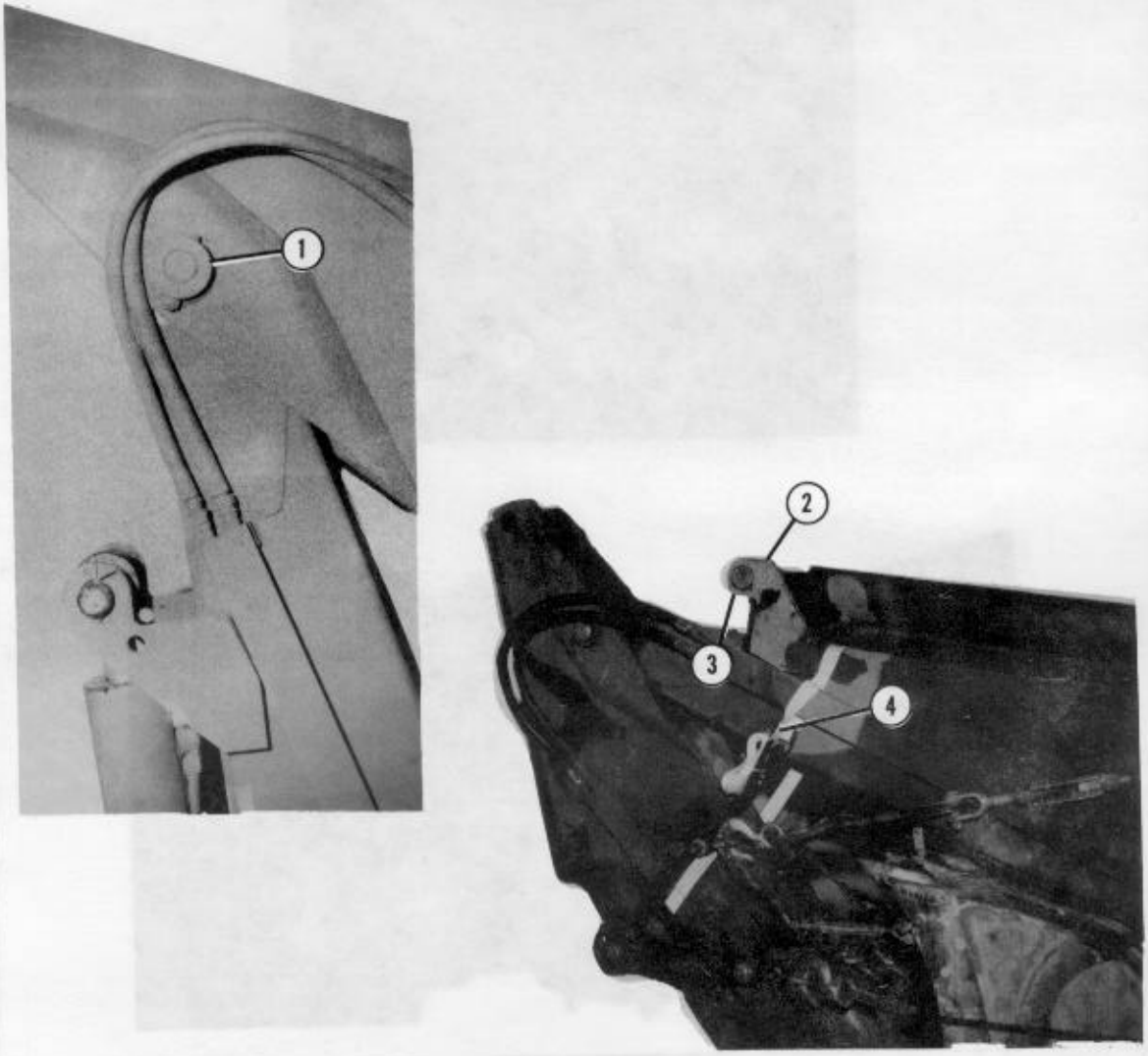
(2) Bolt one end of the brace to the extraction provision on the rear of the tractor.

(3) Fit the other end of the upper cable brace on the bolt on the side of the main boom.

(4) Fit the small brace (with the raised edge) on the bolt, and replace the nut on the bolt.

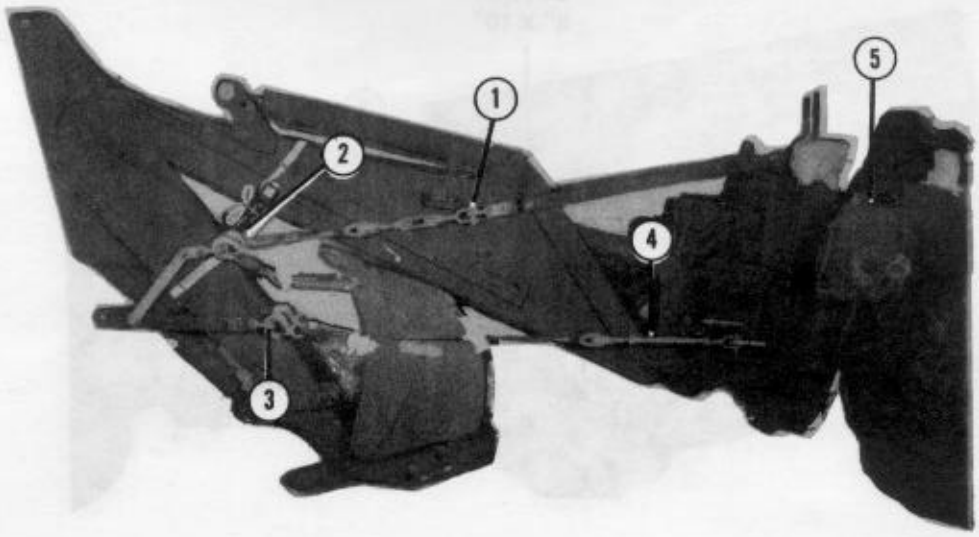
NOTE: The tractor may have to be raised on the outriggers to install the upper cable brace.

Figure 4-23. Upper cable brace installed



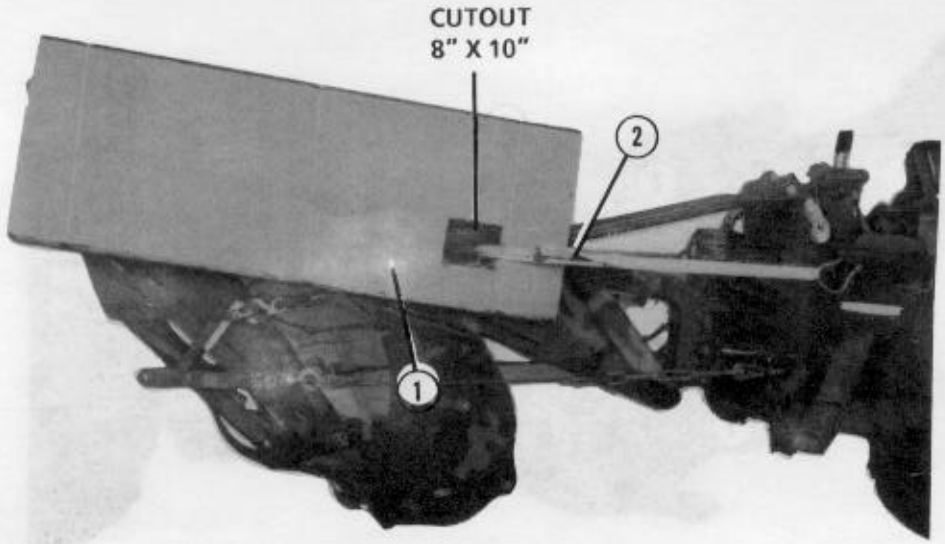
1. Remove the crowd cylinder pin from the top of the dipper stick.
2. Lower the cylinder, and bolt it in the stowage mount.
3. Replace the crowd cylinder pin in the top of the dipper stick.
4. Run a 15-foot lashing between the crowd cylinder and the boom and around the dipper stick (inside of the extraction yoke assembly). Secure the lashing with a D-ring and a load binder.

Figure 4-24. Crowd cylinder stowed



1. Fit a small screw-pin clevis to the small brace on both sides of the boom.
2. Hook the upper cable assembly from the clevis on the small brace to the clevis on the upper yoke assembly brace. Tighten the cable with the turnbuckle located between the hooks.
3. Fit a medium screw-pin clevis on both sides of the extraction yoke and on each eyebolt in the rear suspension plates.
4. Hook the lower cable assembly from the clevis on the extraction yoke to the clevis on the eyebolt on the rear suspension plate. Tighten the cable with the turnbuckle located between the hooks.
5. Raise the outriggers to their highest position, and bolt a cargo suspension clevis to each outrigger.

Figure 4-25. Upper and lower cable assemblies installed

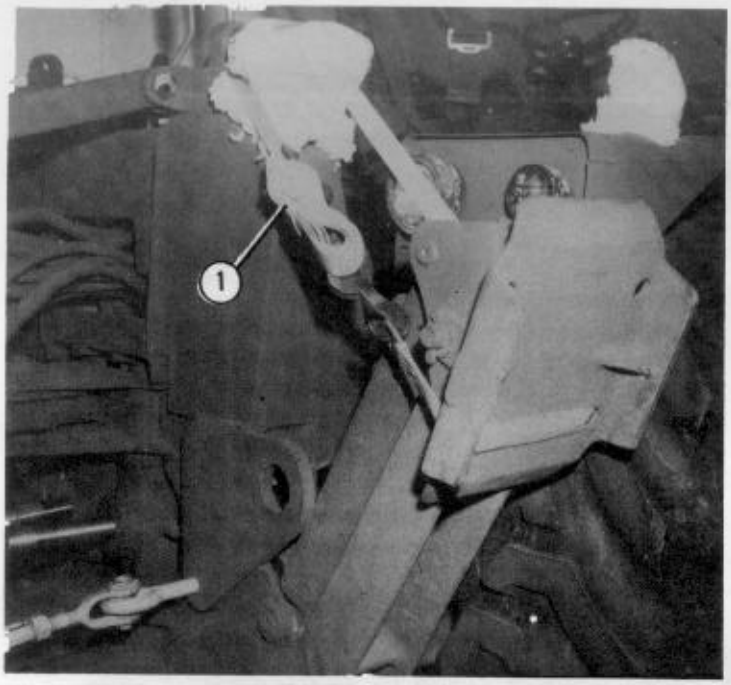


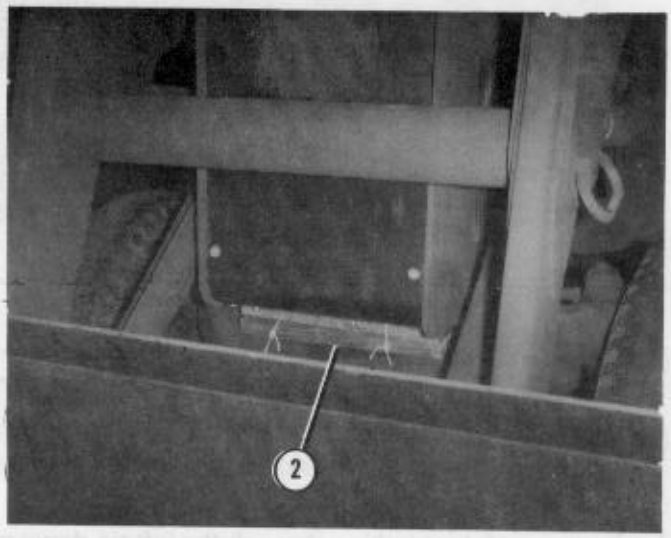
(1) Use two pieces of 36- by 96-inch honeycomb, and make an 8- by 10-inch cutout in each piece of honeycomb for the tie-down provision on the boom. Tie the honeycomb to the boom using type III nylon cord.

(2) Run a 15-foot lashing through the clevis attached to the outrigger and through the tie-down provision located on the right side of the boom. Secure the lashing with a D-ring and a load binder.

(3) Run a 15-foot lashing through the clevis attached to the outrigger and through the tie-down provision on the left side of the boom. Secure the lashing with a D-ring and a load binder (not shown).

Figure 4-26. Honeycomb placed on boom

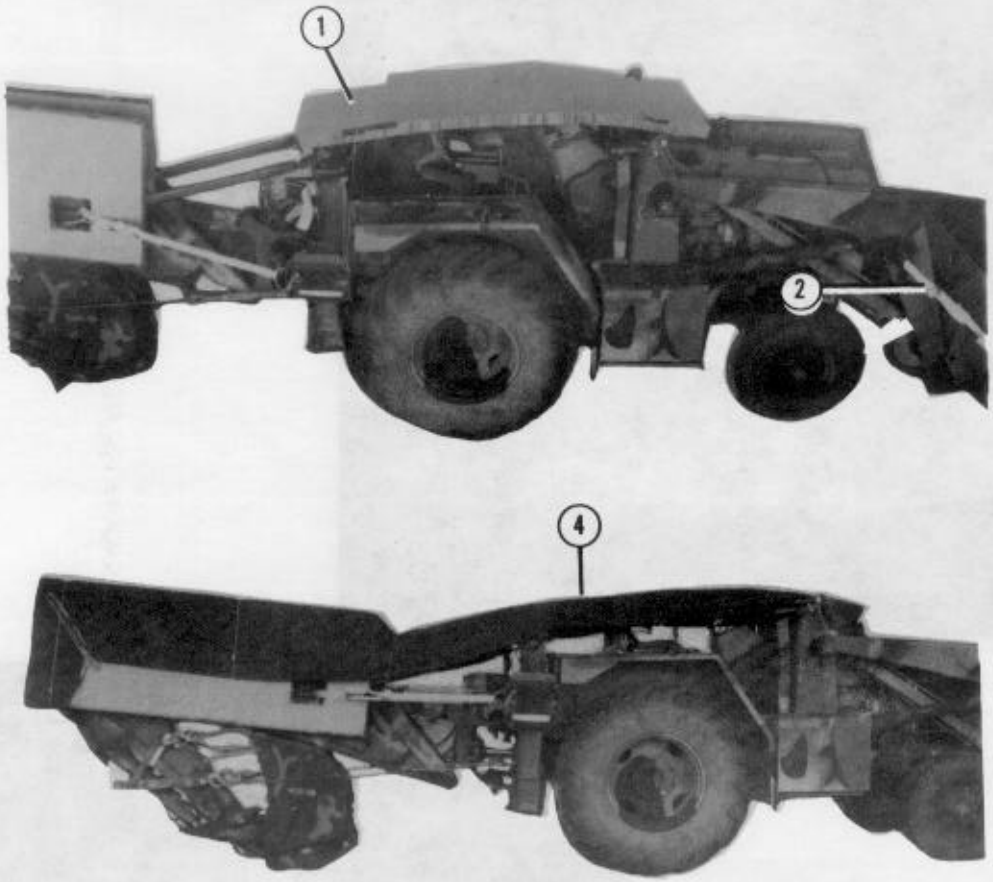




(1) Run a 15-foot lashing around the ROPS bracket and through the foot of the outrigger. Secure the lashing with a D-ring and a load binder. Stow the other outrigger in the same manner.

(2) Tie two 2- by 4- by 20-inch pieces of lumber between the front axle and the frame using type III nylon cord.

Figure 4-27. Outrigger stowed and frame support installed



(1) Lay a 36- by 96-inch piece of honeycomb over the cab between the front lifting points. Tie the honeycomb in place using type III nylon cord.

(2) Run a 15-foot lashing through the right tie-down provision on the loader lifting arm and the tie-down provision on the loader. Secure the lashing with a D-ring and a load binder.

(3) Run a 15-foot lashing through the left tie-down provision on the loader lifting arm and the tie-down provision on the loader. Secure the lashing with a D-ring and a load binder (not shown).

(4) Cover the tractor with a 6- by 24-foot piece of canvas. Cover the tractor from the front lifting points to the end of the dipper stick. Tie the cover in place with type III nylon cord.

NOTE: Make sure that the end of the dipper stick is completely covered to prevent damage to the parachutes during deployment.

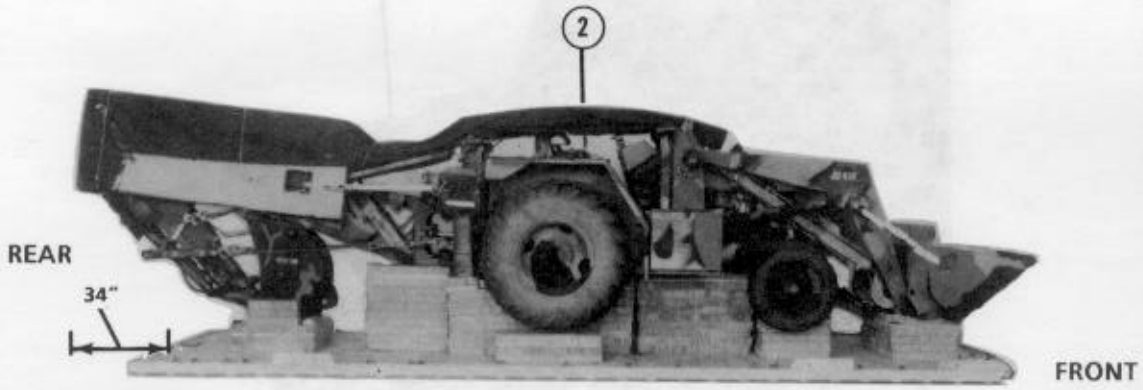
Figure 4-28. Top of tractor prepared

4-5. Positioning Tractor on Platform

Position the tractor on the platform as shown in Figure 4-29.

CAUTION

Make sure the hoses under the backhoe assembly are not pinched.



CAUTION

Make sure the overhang on the rear of the platform is no less than 34 inches and no more than 35 inches.

(1) Lift the tractor using four 9-foot (2-loop), type XXVI nylon webbing slings and four large suspension clevises attached to each suspension point (not shown).

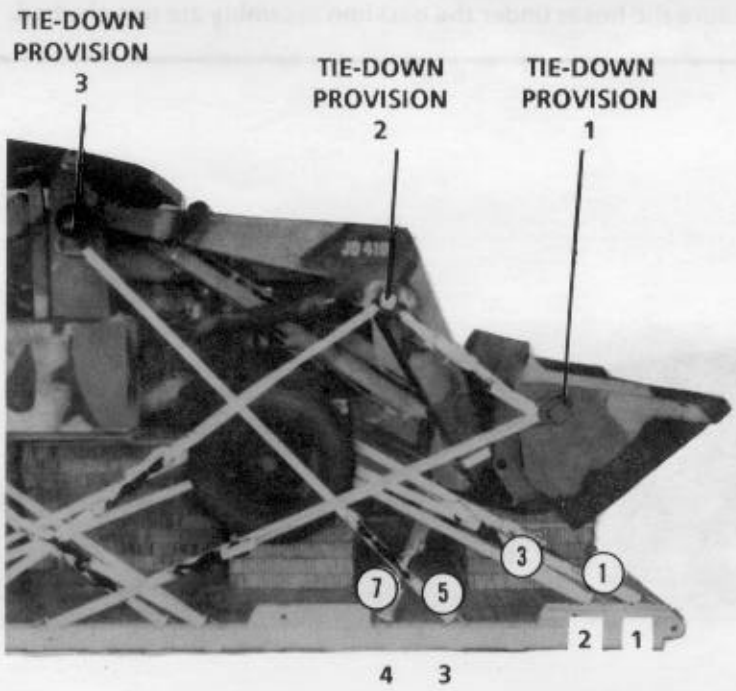
(2) Position the tractor on the platform with the rear of the tractor overhanging the rear of the platform 34 inches.

(3) Remove the lifting slings and clevises from the tractor (not shown).

Figure 4-29. Tractor positioned on platform

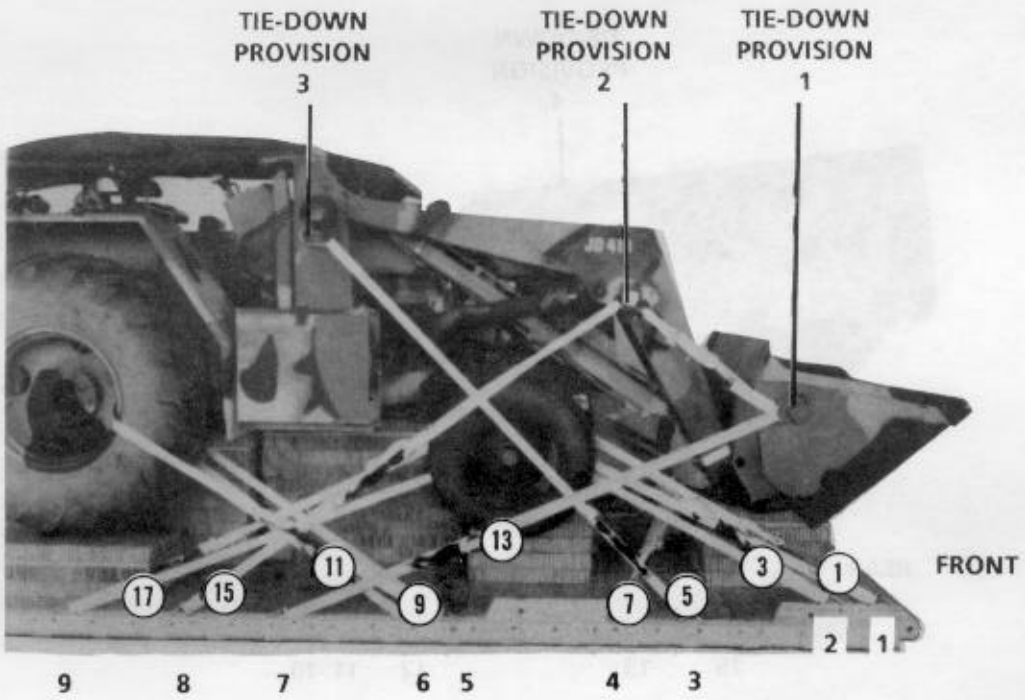
4-6. Installing Lashings

Install thirty-four 15-foot tie-down assemblies, and lash the tractor to the platform as shown in Figures 4-30, 4-31, and 4-32.



Lashing Number	Tie-down Clevis Number	Instructions
		Pass lashing:
1	1	Around the front axle, right side.
2	1A	Around the front axle, left side.
3	2	Around the front axle, right side.
4	2A	Around the front axle, left side.
5	3	Through tie-down provision 3, right side.
6	3A	Through tie-down provision 3, left side.
7	4	Around the left loader arm.
8	4A	Around the right loader arm.

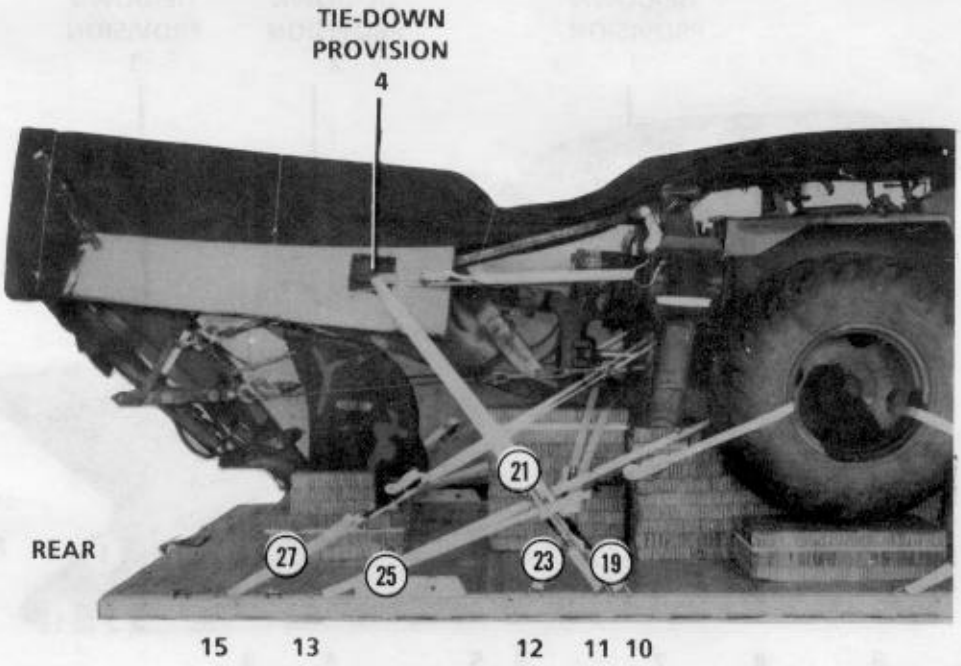
Figure 4-30. Lashings 1 through 8 installed



Lashing Number	Tie-down Clevis Number	Instructions
		Pass lashing:
9	5	Through the rear wheel, right side.
10	5A	Through the rear wheel, left side.
11	6	Around the rear axle, right side.
12	6A	Around the rear axle, left side.
13	7	Through tie-down provision 1, right side.
14	7A	Through tie-down provision 1, left side.
*15	8	Through tie-down provision 2, right side.
*16	8A	Through tie-down provision 2, left side.
17	9	Around the front axle, right side.
18	9A	Around the front axle, left side.

*30-foot lashing

Figure 4-31. Lashings 9 through 18 installed



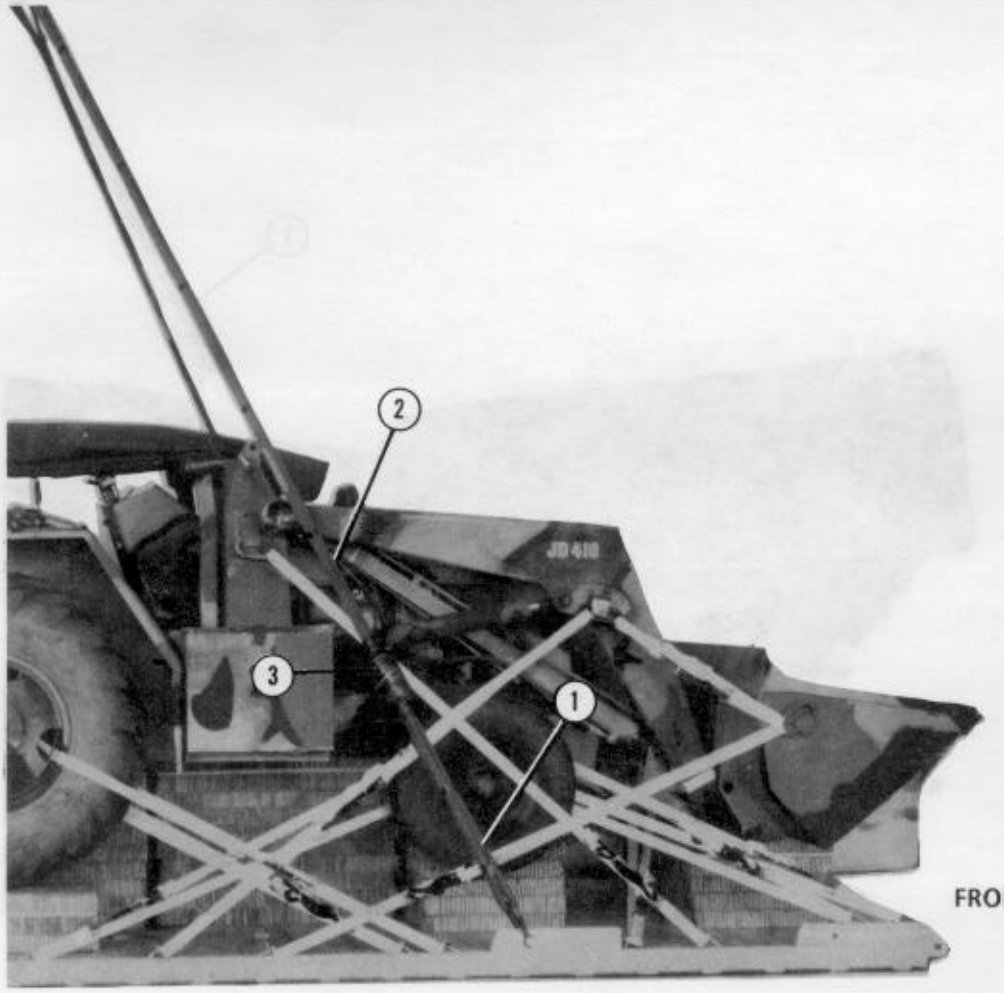
Lashing Number	Tie-down Clevis Number	Instructions
		Pass lashing:
19	10	Through tie-down provision 4, right side.
20	10A	Through tie-down provision 4, left side.
21	11	Through tie-down provision 4, right side.
22	11A	Through tie-down provision 4, left side.
23	12	Around the lower swivel joint.
24	12A	Around the lower swivel joint.
*25	13	Through the rear wheel, right side.
*26	13A	Through the rear wheel, left side.
*27	15	Through the rear suspension plate, right side.
*28	15A	Through the rear suspension plate, left side.

* 30-foot lashing

Figure 4-32. Lashings 19 through 28 installed

4-7. Installing Suspension Slings

Install the suspension slings according to FM 10-500-2/TO 13C7-1-5 and as shown in Figures 4-33 and 4-34.

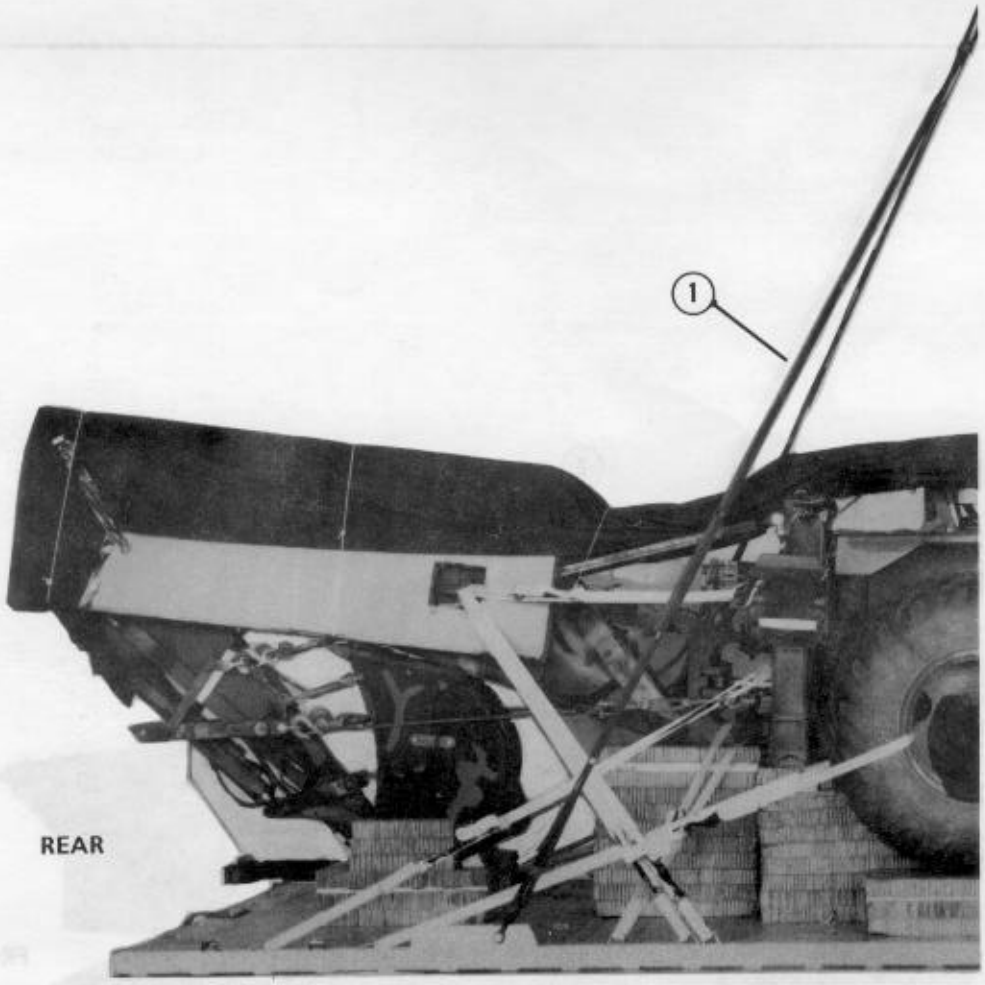


(1) Fit a 3-foot (4-loop), type XXVI nylon webbing sling to the bell portion of a large suspension clevis. Bolt the clevis to the right front suspension link. Repeat this step for the left front suspension link.

(2) Use a 3 3/4-inch, two-point link to attach a 12-foot (4-loop), type XXVI nylon webbing sling to each 3-foot sling installed in 1 above.

(3) Cover the 3 3/4-inch, two-point links using two pieces of 8- by 14-inch felt. Tape the felt in place.

Figure 4-33. Front suspension slings installed

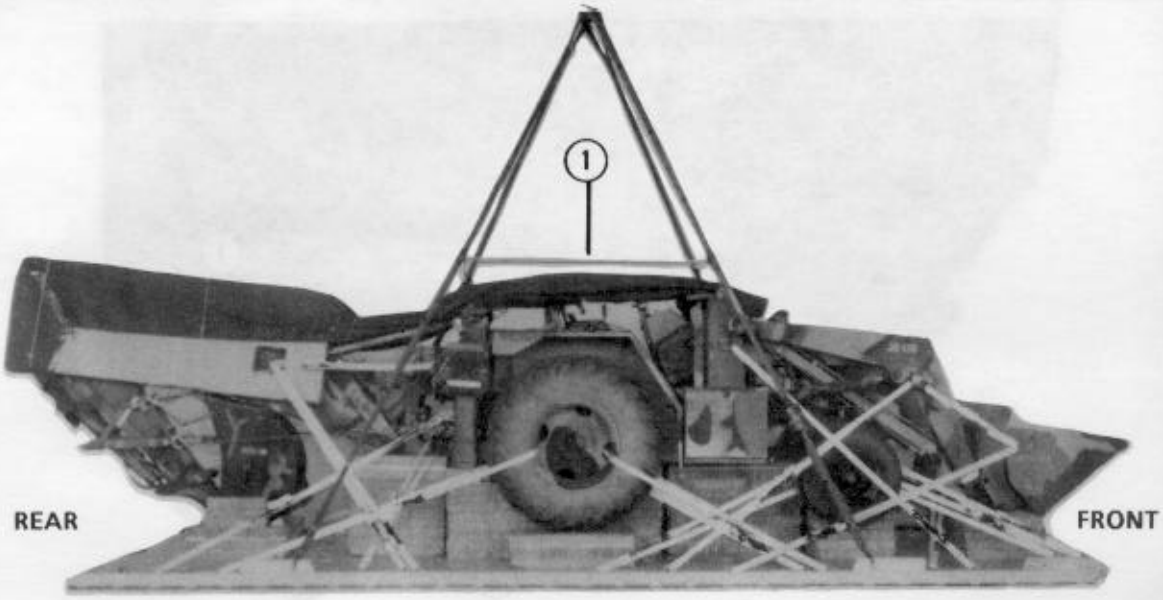


(1) Fit a 16-foot (4-loop), type XXVI nylon webbing sling to the bell portion of a large suspension clevis. Bolt the clevis to the right rear suspension link. Repeat this step for the left rear suspension link.

Figure 4-34. Rear suspension slings installed

4-8. Installing Deadman's Tie

Install a deadman's tie as shown in Figure 4-35.



NOTE: Raise the suspension slings until they are tight.

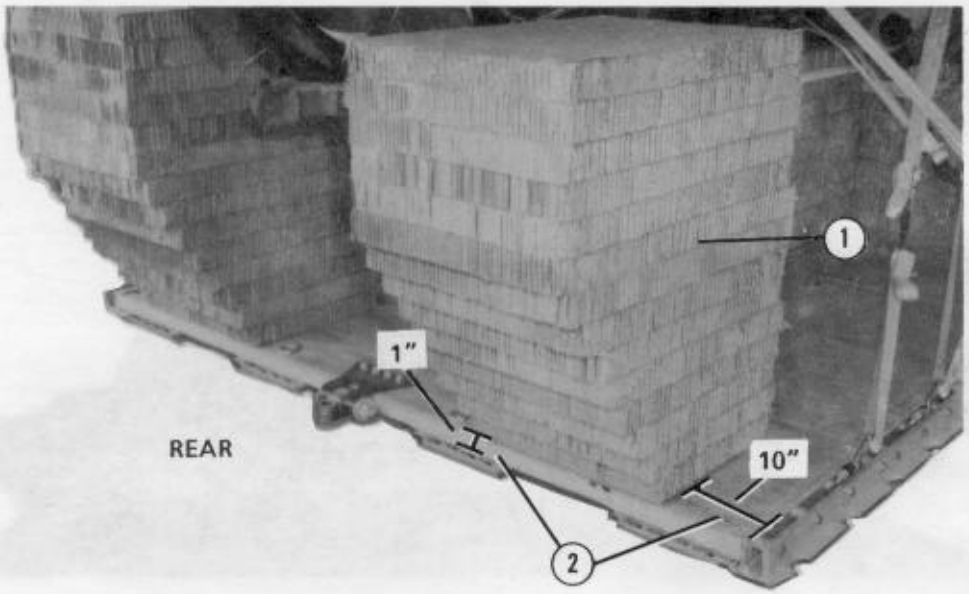
(1) Install a deadman's tie to the four suspension slings 4 inches above the tractor cover according to FM 10-500-2/TO 13C7-1-5.

(2) Lower the suspension slings on the load (not shown).

Figure 4-35. Deadman's tie installed

4-9. Building, Positioning, and Securing Parachute Stowage Platform

Build and position two honeycomb stacks as supports for the parachute stowage platform as shown in Figure 4-36. Construct the parachute stowage platform as shown in Figures 4-37 and 4-38. Lash the parachute stowage platform as shown in Figure 4-39 using four 15-foot tie-down assemblies.



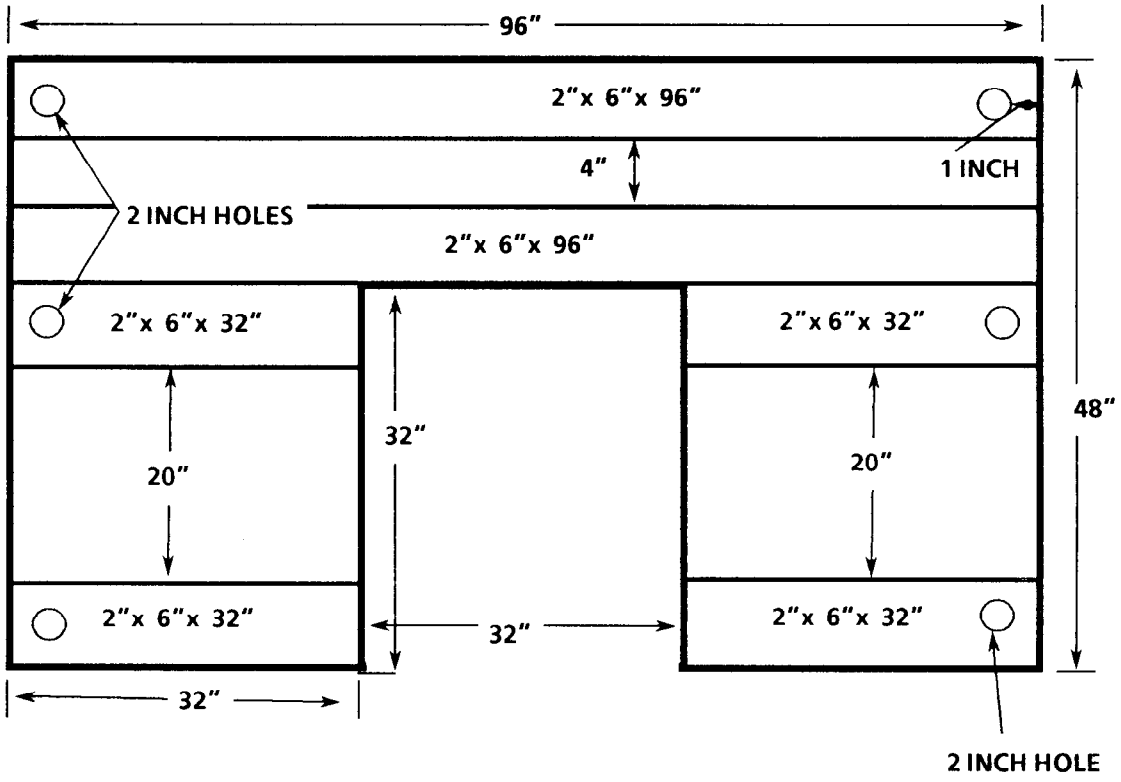
(1) Build two honeycomb stacks using the dimensions given below. Use 14 pieces of honeycomb in each stack.

(2) Set each honeycomb stack 1 inch from the rear edge of the platform and 10 inches from each side rail.

Honeycomb Layer	Width (Inches)	Length (Inches)	Honeycomb Layer	Width (Inches)	Length (Inches)
1	24	20	8	24	34
2	24	22	9	24	36
3	24	24	10	24	36
4	24	26	11	24	36
5	24	28	12	24	36
6	24	30	13	24	36
7	24	32	14	24	36

Figure 4-36. Honeycomb positioned for parachute stowage platform

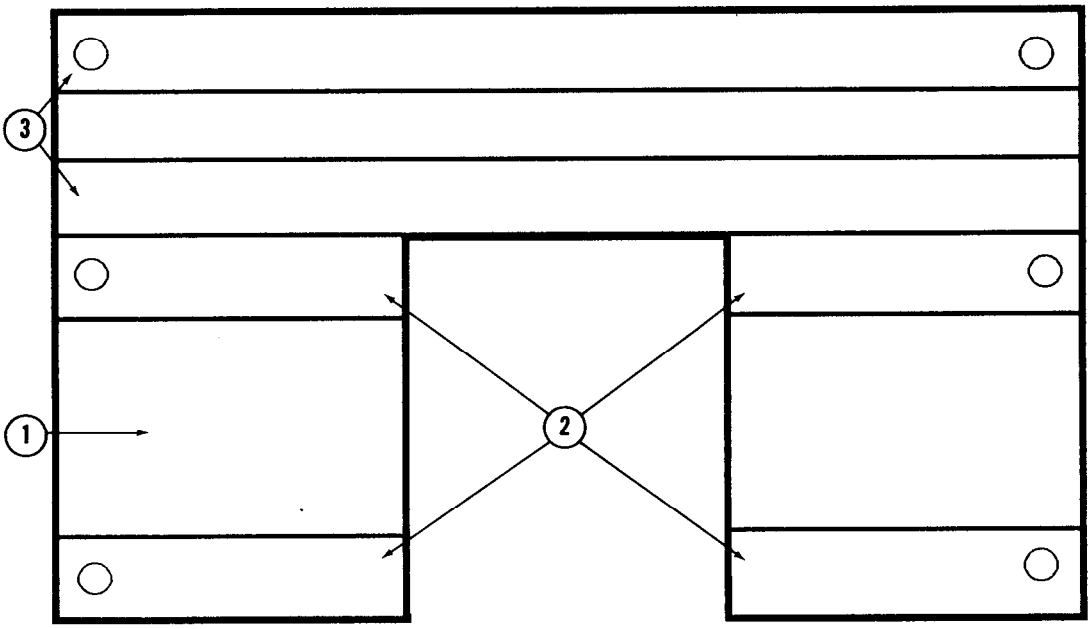
NOTE: This drawing is not drawn to scale.



Item Number	Pieces	Width (Inches)	Length (Inches)	Material
1	1	96	48	3/4-inch plywood
2	4	32	6	2- by 6-inch lumber
3	2	96	6	2- by 6-inch lumber

Figure 4-37. Materials required to build the parachute stowage platform

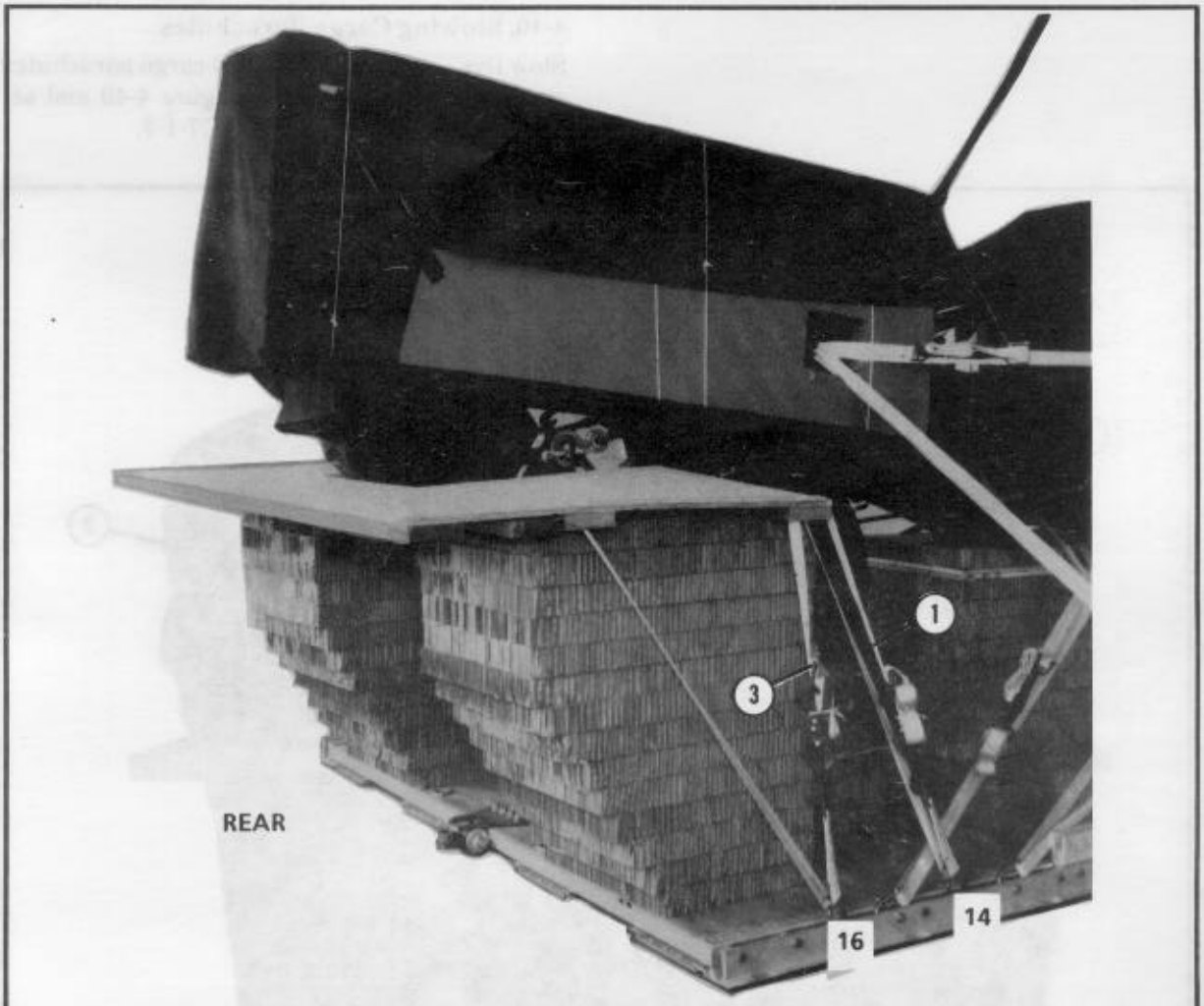
NOTES: 1. This drawing is not drawn to scale.
2. Circled numbers refer to item numbers.



Step:

1. Build the parachute stowage platform using the materials shown in Figure 4-37 and using eightpenny nails to secure the parachute stowage platform together.

Figure 4-38. Parachute stowage platform built

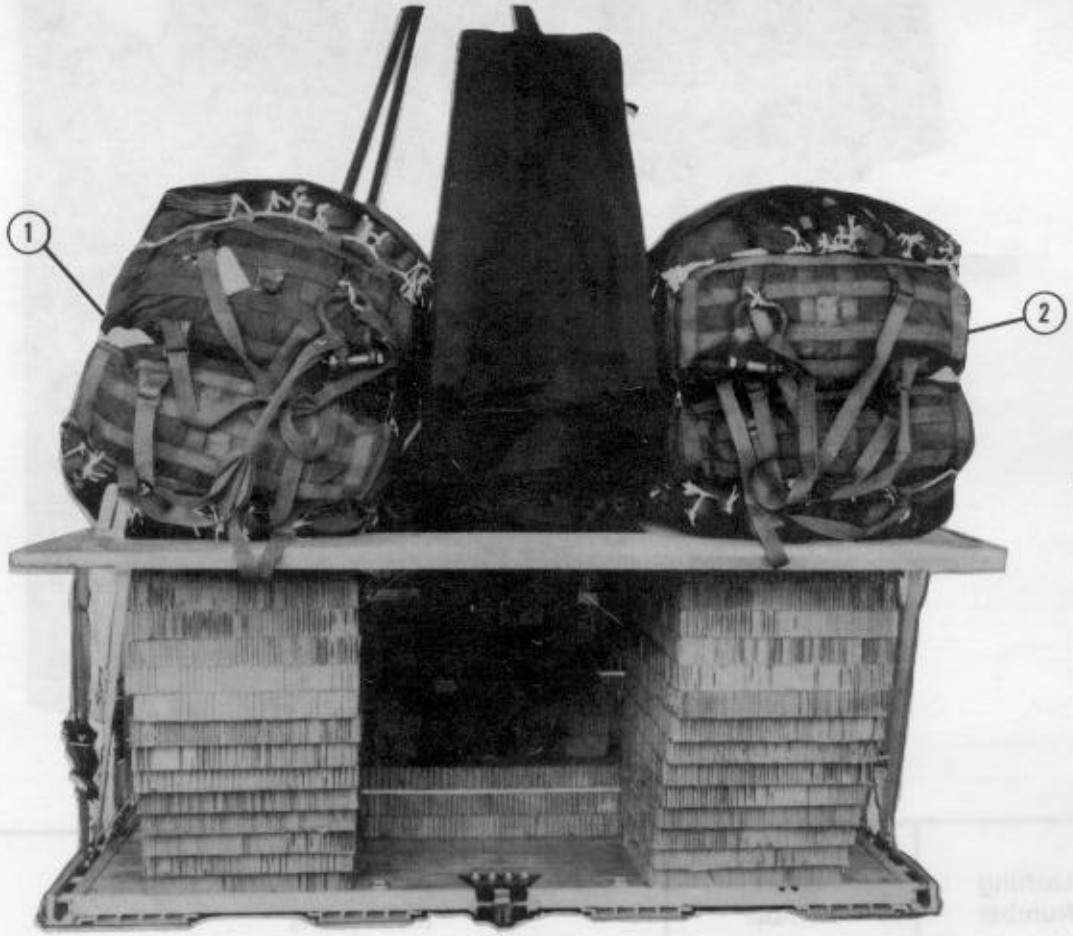


Lashing Number	Tie-down Clevis Number	Instructions
		Pass lashing:
1	14	Through the front hole of the stowage platform, right side.
2	14A	Through the front hole of the stowage platform, left side.
3	16	Through the center hole of the stowage platform and down through the front hole of the stowage platform, right side.
4	16A	Through the center hole of the stowage platform and down through the front hole of the stowage platform, left side.

Figure 4-39. Parachute stowage platform secured

4-10. Stowing Cargo Parachutes

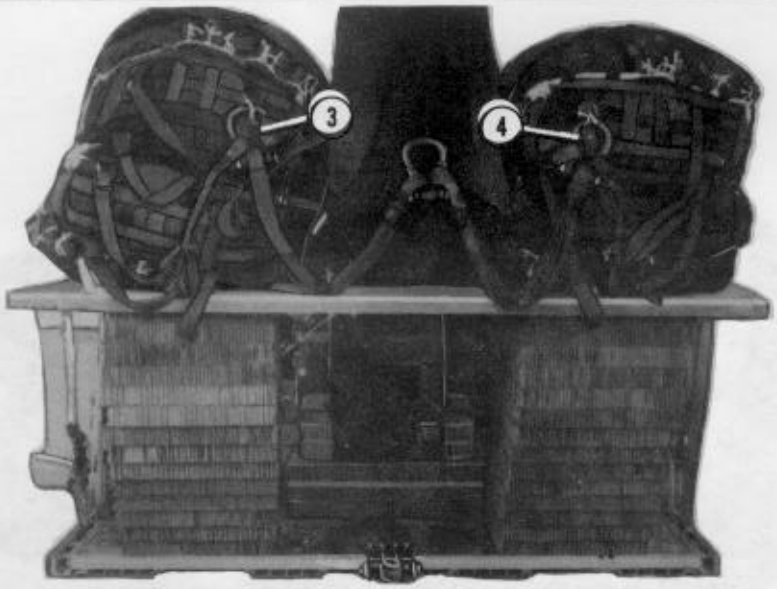
Stow five G-11A or four G-11B cargo parachutes on the tractor as shown in Figure 4-40 and according to FM 10-500-2/TO 13C7-1-5.



(1) Set two G-11B cargo parachutes on the left side of the stowage platform with the bottom parachute riser compartment down and the top parachute riser compartment up.

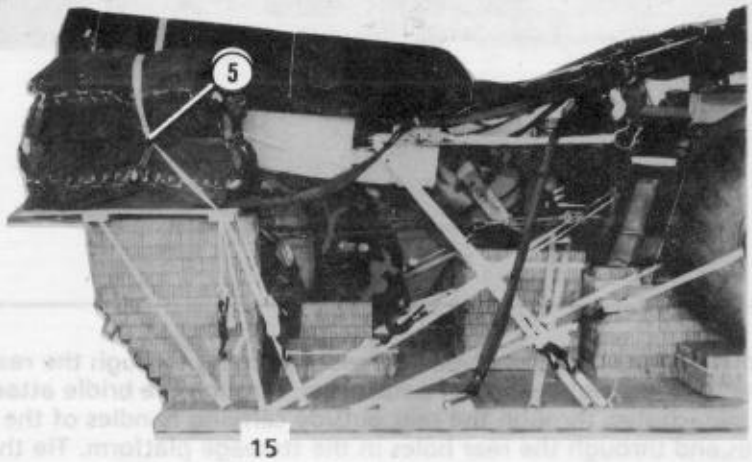
(2) Set two G-11B cargo parachutes on the right side of the stowage platform with the second parachute riser up. If G-11A parachutes are used, set the third parachute on the right side of the stowage tray with the riser compartment up.

Figure 4-40. Cargo parachutes stowed



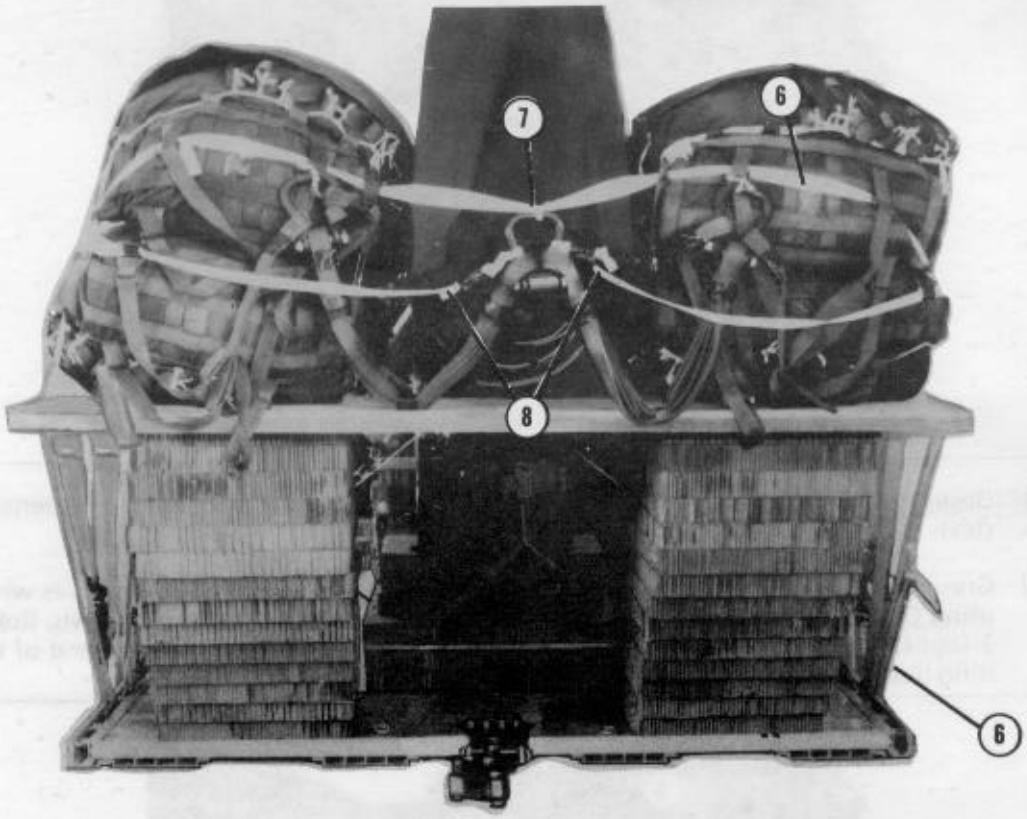
(3) Group the two parachute bridle assemblies on the left side with a large suspension clevis. Bolt a 3-foot (2-loop), type XXVI nylon webbing sling to the clevis.

(4) Group the two parachute bridle assemblies (three parachute bridle assemblies when using G-11A cargo parachutes) on the right side with a large suspension clevis. Bolt a 3-foot (2-loop), type XXVI nylon webbing sling on the clevis. Join the free end of the sling to the sling mentioned in 3 above with a large suspension clevis.



(5) Run a 10-yard length of type VIII nylon webbing through the center outside carrying handles of the right group of parachutes, through the center inside carrying handles of both top parachutes, through the center outside carrying handles of the left group of parachutes, and through the front holes in the stowage platform. Tie the ends of the webbing to clevises 15 and 15A according to FM 10-500-2/TO 13C7-1-5.

Figure 4-40. Cargo parachutes stowed (continued)



6	Run another 10-yard length of type VIII nylon webbing through the rear outside carrying handles of the right group of parachutes, through the bridle attaching loops of both top parachutes, through the rear outside carrying handles of the left group of parachutes,and through the rear holes in the stowage platform. Tie the webbing to clevises 16 and 16A according to FM 10-500-2/TO 13C7-1-5.
7	Tie the large suspension clevis to the second restraint strap with two lengths of type I, 1/4-inch cotton webbing.
8	Install two multicut parachute release straps according to FM 10-500-2/TO 13C7-1-5.

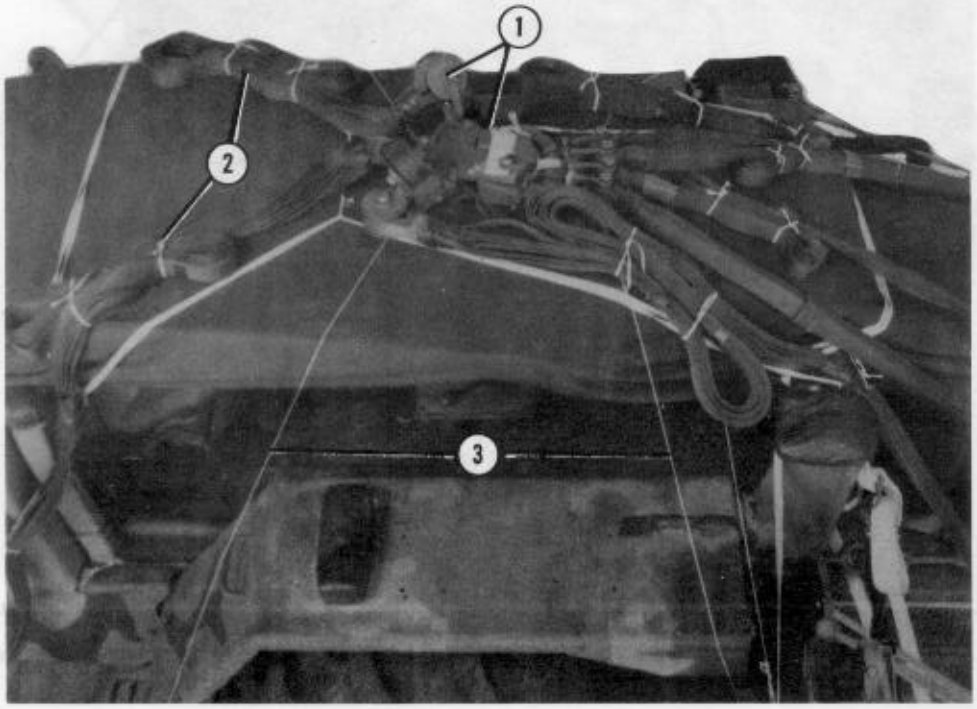
Figure 4-40. Cargo parachutes stowed (continued)

4-11. Installing Release System

Prepare and install the release system as shown in Figure 4-41.

CAUTION

An additional 10-foot length of arming lanyard may be required in order to reach the carrying handle of the cargo parachute.



1. Prepare an M-2 cargo release assembly according to FM 10-500-2/TO 13C7-1-5. Attach the release assembly to the suspension slings and cargo parachutes according to FM 10-500-2/TO 13C7-1-5.
2. Fold the suspension slings, and secure the folds with lengths of type I, 1/4-inch cotton webbing.
3. Secure the top and bottom of the M-2 release with type III nylon cord and according to FM 10-500-2/TO 13C7-1-5.

NOTE: Riser extension stow ties may have to be cut to allow the extensions to reach the release assembly.

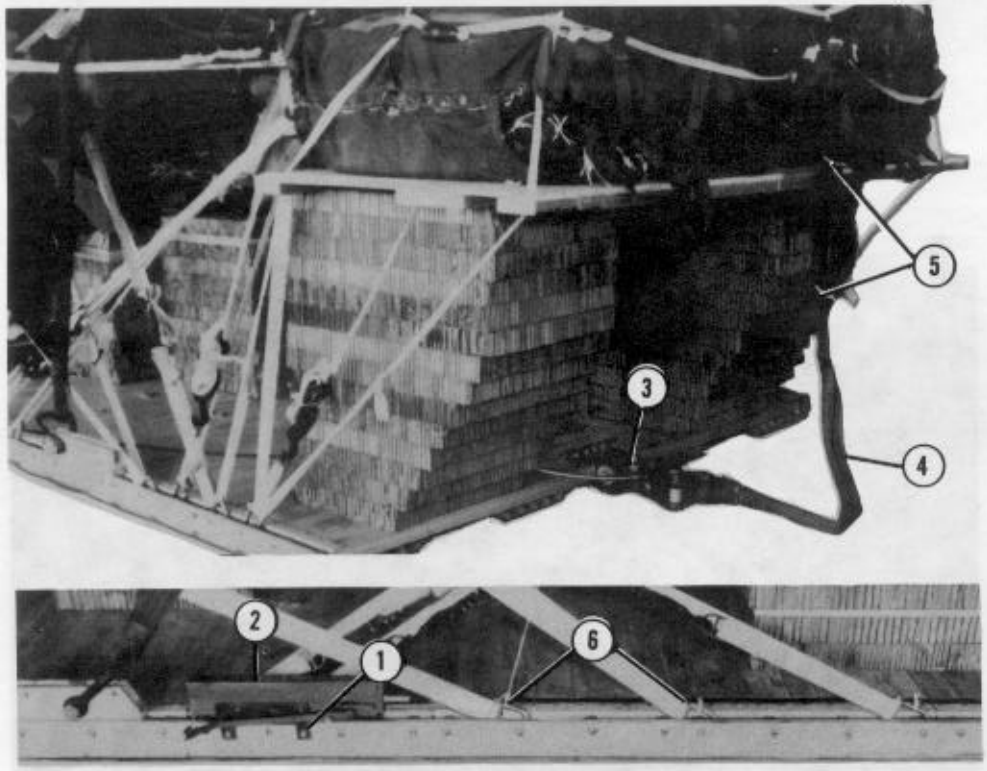
Figure 4-41. Release system installed

4-12. Installing Extraction System

Install the EFTC extraction system as shown in Figure 4-42.

4-13. Installing Provisions for Emergency Restraints

Install provisions for emergency restraints according to FM 10-500-2/TO 13C7-1-5. These provisions apply to the C-130 and C-141 aircraft.



1. Attach the type V EFTA mounting brackets to the rear mounting holes on the left platform rail.
2. Install the actuator to the EFTA mounting brackets with a 24-foot cable according to FM 10-500-2/TO 13C7-1-5.
3. Using a 5 1/4-inch latch adapter assembly, attach the latch assembly to the extraction bracket with the locking nut hole facing toward the left side of the platform according to FM 10-500-2/TO 13C7-1-5.
4. Connect one end of a 9-foot (2-loop), type XXVI nylon webbing sling (deployment line) to the right spacer of the link assembly.Connect the free end to the center large clevis on the 3-foot clustering slings.
5. Fold the excess deployment line, and secure the folds with tape or type I, 1/4-inch cotton webbing.
6. Safety tie the 24-foot cable to the platform clevises along the left rail using lengths of type I, 1/4-inch cotton webbing.

Figure 4-42. Extraction system installed

4-14. Placing Extraction Parachute

Place the extraction parachute as described below.

a. C-130 Aircraft. Place one heavy-duty, 28-foot cargo extraction parachute; a 60-foot (3-loop), type XXVI nylon webbing extraction line; and a 5 1/2-inch, two-point link assembly on the load for installation in the aircraft.

b. C-141 Aircraft. Place one heavy-duty, 28-foot cargo extraction parachute and a continuous 140-foot (3-loop), type XXVI nylon webbing extraction line on the load for installation in the aircraft.

4-15. Marking Rigged Load

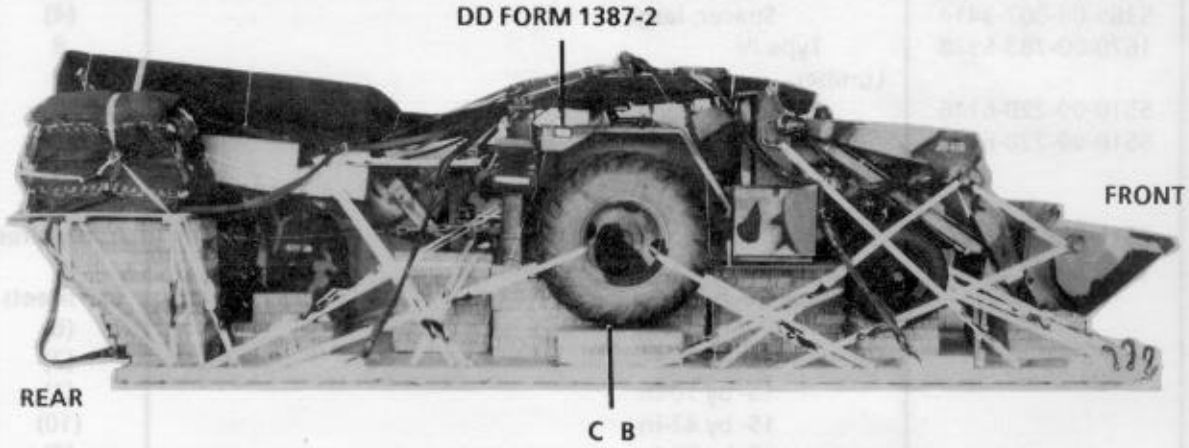
Mark the rigged load according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 4-43. Complete DD Form 1387-2, and securely attach it to the load. Indicate on DD Form 1387-2 that the load has been prepared according to AFR 71-4/TM 38-250. If the load varies from that shown, the weight, height, CB, and parachute requirements must be recomputed.

4-16. Equipment Required

Use the equipment listed in Table 4-1 to rig this load.

CAUTION

Make the final rigger inspection required by FM 10-500-2/TO 13C7-1-5 before the load leaves the rigging site.



RIGGED LOAD DATA

Weight: Load shown	19,690 pounds
Maximum load allowed	21,000 pounds
Height	95 inches
Width	108 inches
Length	336 inches
Overhang: Front	14 inshes
Rear	34 inches
CB (from front edge of platform)	149 inches
Extraction System	EFTC

Figure 4-43. JD 410 tractor rigged on a type V platform for low-velocity airdrop

Table 4-1. Equipment required for rigging the JD 410 tractor on a type V platform for low-velocity airdrop

NSN	Item	Quantity
670-00-162-4979	Adapter, link assembly	2
8040-00-273-8713	Adhesive, paste, 1-gal	As required
	Clevis, suspension:	
4030-00-678-8562	3/4-in (medium)	2
4030-00-090-5354	1-in (large)	6
8305-00-242-3593	Cloth, cotton duck, 60-in	As required
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
1670-00-434-5782	Coupling, airdrop, extraction force transfer w 24-ft cable	1
8135-00-664-6958	Cushioning material, packaging,cellulose wadding	As required
8305-00-958-3685	Felt, 1/2-in thick	As required
1670-01-183-2678	Leaf, extraction line	2
	Line, extraction:	
1670-01-062-6313	60-ft (3-loop), type XXVI nylon webbing or	1
1670-01-107-7651	140-ft (3-loop), type XXVI nylon webbing	1
	Link assembly:	
	Two-point:	2
5306-00-435-8994	Bolt, 1-in diam, 4-in long	(4)
5310-00-232-5165	Nut, 1-in, hexagonal	(4)
1670-00-003-1953	Plate, side, 3 3/4-in	(4)
5365-00-007-3414	Spacer, large	(4)
1670-00-783-5988	Type IV	8
	Lumber:	
5510-00-220-6146	2- by 4- by 20-in	5
5510-00-220-6448	2- by 6-in:	
	32-in	4
	96-in	2
5315-00-010-4657	Nail, steel wire, common, 6d	As required
1670-00-753-3928	Pad, energy-dissipating, honeycomb,	
	3- by 36- by 96-in:	27 sheets
	6- by 18-in	(6)
	15- by 7-in	(2)
	15- by 10-in	(1)
	15- by 42-in	(10)
	18- by 36-in	(6)
	24- by 20-in	(2)
	24- by 22-in	(2)
	24- by 24-in	(2)
	24- by 30-in	(12)
	24- by 32-in	(2)
	24- by 34-in	(2)
	24- by 36-in	(12)
	26- by 24-in	(11)
	28- by 24-in	(6)
	36- by 30-in	(3)
	44- by 11-in	(1)

Table 4-1. Equipment required for rigging the JD 410 tractor on a type V platform for low-velocity airdrop (continued)

NSN	Item	Quantity
	44- by 17-in	(1)
	44- by 36-in	(8)
	48- by 24-in	(10)
	Parachute:	
	Cargo:	
1670-00-269-1107	G-11A or	5
1670-01-016-7841	G-11B	4
1670-00-040-8135	Cargo extraction, 28-ft, heavy-duty	1
	Platform, AD, type V, 24-ft:	1
	Bracket:	
1670-01-162-2375	Inside EFTA	(1)
1670-01-162-2374	Outside EFTA	(1)
1670-01-162-2372	Clevis assembly	(32)
1670-01-162-2376	Extraction bracket assembly	(1)
1670-01-247-2389	Suspension link	(4)
1670-01-162-2381	Tandem link	(2)
5530-00-128-4981	Plywood, 3/4-in:	
	15- by 42-in	1
	18- by 36-in	2
	24- by 30-in	2
	26- by 24-in	1
	28- by 24-in	1
	36- by 30-in	1
	44- by 11-in	2
	44- by 28-in	1
	48- by 24-in	1
	96- by 48-in	1
1670-01-097-8817	Release, cargo parachute, M-2	1
	Sling, cargo airdrop, type XXVI nylon webbing:	
	For deployment:	
1670-01-062-6301	3-ft (2-loop)	2
1670-01-062-6304	9-ft (2-loop)	1
	For lifting:	
1670-01-062-6304	9-ft (2-loop)	4
	For riser extensions:	
1670-01-062-6302	20-ft (2-loop)	12
	For suspension:	
1670-00-432-2499	3-ft (4-loop) or	4
1670-01-062-6306	3-ft (4-loop)	4
1670-00-432-2506	12-ft (4-loop) or	2
1670-01-062-6307	12-ft (4-loop)	2
1670-00-432-2507	16-ft (4-loop) or	2
1670-00-003-7237	16-ft (4-loop) or	2
1670-01-062-6308	16-ft (4-loop)	2
1670-00-040-8219	Strap, parachute release, multicut comes w 3 knives	1

Table 4-1. Equipment required for rigging the JD 410 tractor on a type V platform for low-velocity airdrop (continued)

NSN	Item	Quantity
7510-00-266-5016	Tape, adhesive, 2-in	As required
1670-00-937-0271	Tie-down assembly, 15-ft	44
	Webbing:	
8305-00-268-2411	Cotton, 1/4-inch, type I	As required
	Nylon:	
	Tubular:	
8305-00-082-5752	1/2-in or	As required
8305-00-268-2453	1/2-in	As required
8305-0 0-263-3591	Type VIII	As required

GLOSSARY

ACB attitude control bar
AD airdrop
AFB Air Force base
AFJMAN Air Force joint manual
AFR Air Force regulation
AFTO Air Force technical order
attn attention
CB center of balance
d penny
DA Department of the Army
DC District of Columbia
DD Department of Defense
diam diameter
EFTA extraction force transfer actuator
EFTC extraction force transfer coupling
FL Florida
FM field manual
FOPS falling overhead protective structure
ft feet/foot
gal gallon
HQ headquarters
IL Illinois
in inch
LAPE low-altitude parachute-extraction
LAPES low-altitude parachute-extraction system
lb pound
LV low-velocity
NAVAIR Naval Air Systems Command
no number
NSN national stock number
rel release
ROPS roll-over protection structure
SEE small emplacement excavator
SL/CS static line/connector strap
TM technical manual
TO technical order
TRADOC United States Army Training and Doctrine Command
TX Texas
US United States
VA Virginia
w with
y yard

REFERENCES

These documents must be available to the intended users of this publication.

*AFJMAN 24-204/TM 38-250. *Packaging and Materials Handling: Preparing Hazardous Materials for Military Air Shipments.* **November 1994.**

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FM 10-553/TO 13C7-18-41. *Airdrop of Supplies and Equipment: Rigging Ammunition.* **4 December 1981.**

TM 10-1670-208-20&P/TO 13C3-4-12. *Organizational Maintenance Manual Including Repair Parts and Special Tools List for Platforms, Types II Modular and LAPES/Airdrop Modular.* **10 August 1978.**

TM 10-1670-268-20&P/TO 13C7-52-22. *Organizational Maintenance Manual With Repair Parts and Special Tools List: Type V Airdrop Platform.* **1 June 1986.**

TM 10-1670-277-23&P/TO 13C5-28-2/NAVAIR 13-1-30. *Unit and Intermediate DS Maintenance Manual Including Repair Parts and Special Tools List For Parachute, 28-Ft Diameter, Extraction.* **9 October 1990.**

*** **TM 10-1670-280-23&P/TO13C5-31-2/NAVAIR 13-1-31.** *Unit and Intermediate DS Maintenance Manual Including Repair Parts and Special Tool List For Parachute, Cargo Type, G-11A, G-11B and G-11C.* **5 August 1991.**

TM 10-1670-286-20/TO 13C5-2-41. *Unit Maintenance Manual for Sling/Extraction Line Panel (Including Stowing Procedures).* **1 April 1986.**

AFTO Form 22. *Technical Order Publication Improvement Report.* **April 1973.**

DA Form 2028. *Recommended Changes to Publications and Blank Forms.* **February 1974.**

Shipper's Declaration for Dangerous Goods. *Locally Procured Form.*

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* AFJMAN 24-204/TM 38-250 has superseded AFR 71-4/TM 38-250 (15 January 1988). Change 3 reflects this change. The basic manual and changes 1 and 2 still reference the superseded publication. You may wish to make pen and ink changes to update the old reference citations accordingly.

** Shipper's Declaration for Dangerous Goods has superseded DD Form 1387-2 (February 1982). Change 3 reflects this change. The basic manual and changes 1 and 2 still reference the superseded publication. You may wish to make pin and ink changes to update the old reference citations accordingly.

*** TM 10-1670-280-23&P/TO 13C5-31-2/NAVAIR 13-1-31 has superseded TM10-1670-215-23/TO 13C5-1-102. (5 August 1991). Change 3 reflects this change. The basic manual and changes 1 and 2 still reference the superseded publication. You may wish to make pen and ink changes to update the old reference citations accordingly.

*U.S. GOVERNMENT PRINTING OFFICE:1996-728-027/60009

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29 MAY 1984

By Order of the Secretaries of the Army and the Air Force:

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